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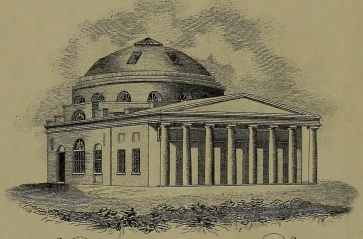

University of Maryland

Md.
Coll.

Dissertations of Doughlas Tanner

Early Degree of Mechanical and Doctor of Civil Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Mechanical and/or Doctor of Physics during the years 1853–1857. The individual dissertations were bound together during the 1960's. The origin of tables of contents for the bound volumes varied and multiple essays by authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team was re-assigned and corrected the tables of contents was: Richard J. Dolan, Historical Librarian, Preservation Officer; Marie McAgnes Parker, Microfilm Unit, Preservation Librarian; Angela Lockhart and Carol Hartwig-Henry, Reference Division, Book Horse, and Schary and Mary E. Wolff, Services Division.

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

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1847 (b)

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Hamilton, Summerfield P.	The Circulation of the Blood
Baldwin, Abraham S.	Pleurisy
White, John Randolph	Acute Pneumonia
Middleton, John D.	Acute Gastritis
Webster, Richard Henry	Intermittent Fever
Thabot, Lawrence T.	Phthisis Pulmonalis
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Lynch, Thomas A.	Cephalagia
Hammond, William	Pneumonia

HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1847 (b)

King, Vincent ~~Dee.~~ D'Oliveria	Pericarditis	30p.
Hall, J. Thomas	Phthisis Pulmonalis	29p.
Sperry, J. Austin	Phthisis	24p.
Hamilton, Summerfield P.	The Circulation of the Blood	6p.
Baldwin, Abraham S.	Pleurisy	21p.
White, John Randolph	Acute Pneumonia	24p.
Middleton, John D.	Acute Gastritis	14p.
Webster, Richard Henry	Intermittent Fever	25p.
Thabot, Lawrence T.	Phthisis Pulmonalis	35p.
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Lilly, Henry A.	Scarlatina	28p.
Keller, Daniel	Injurious and Pernicious Effects of Alcohol on the Human System	17p.
Ward, ~~A.~~ Oscar V.	Intermittent Fever	31p.
Galloway, John	Necrosis	28p.
Lynch, Thomas A.	Cephalagia	19p.
Hammond, William	Pneumonia	31p.

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An

Inaugural dissertation

On

Pericarditis.

Submitted to the examination of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Vincent A. Olivieria King

Baltimore Infirmary

Feb 1st 1847.

MD

18888

Preface

It is with pleasure and respect that I offer this humble treatise at the shrine of my Alma Mater, respite as I am with anxiety and pride to be ranked among her distinguished Alumni; but from her Ministers I would crave a kind indulgence in the inspection of the humble fruit, I have collected with no little trouble for how ever insignificant the offering it is my mightiest.

On the score of originality I claim nought. Pericarditis I have chosen as my theme, and no one is better aware than myself how immeasurably the the subject stands above the capacities of him who has dared to scan it.

And to those that would censure my rashness or deplore my misfortune.—

— I point to the language of the Poet "Samen magnum accidit ausus."

Pericarditis.

"The Pericardium (from περὶ & καρδία the heart) is a fibroserous membrane derives its serous layer, lists the dura mater, from the reflected serous membrane of the viscus which it encloses; the fibrous layer is attached above to the great vessels at the root of the heart, and below to the tendinous portion of the diaphragm. The serous membrane invests the heart with the commencement of its great vessels and is then reflected upon the internal surface of the fibrous layer.

This great fibroserous membrane is frequently the seat of intense and acute inflammation, destroying the patient sometimes suddenly, but much more common when (when its termination proves fatal) at a remote period.

This disease was entirely unknown before the time of Farmer. In 1826 M. Louis threw considerable light on the subject

But the contributions of Stokes, Hope, and Williams have brought it to its acme, and from a comparative obscurity, have made it to become one of the readiest diagnosed, & best understood affections that our nosological tables presented.

This Pericardiac inflammation is generally universal. Laennec states that it may also (altho' rarely) be partial and restricted having its seat but in a very limited portion of the sac. This Hope seems to doubt, at least he says, that the inflammation thus stated to exist confined to a small space of the membrane, cannot be proved to be of that character, because the general symptoms and physical signs in that we have in the one instance, are precisely the same as those that are presented to us in the other, differing only in degree and again since the adhesives in universal inflammation may be partial provided the layers of lymph happen to have been only partial deposited.

Dr. Latham, and other judicious investigators agree with Laennec in regarding these cases, where the Physical signs are confined but to a small portion of the Pericardium, and where but a slight amount of effusion takes place, as undoubted cases of local pericarditis.

Causes of Acute Pericarditis

Acute inflammation of ~~of~~ the pericardium is liable to become excited by the same causes which give rise to inflammation in similar tissues. It is likely to arise as do all other inflammations after exposure to the disagreeable vicissitudes of weather; consequently like the inflammations occurring in the serous membranes generally is much more common during the Autumnal and winter months than the other seasons of the year. And occasionally when no exciting cause is appreciable. but Watson says (and so say all authors of greater or less merit) that for one such case of pericarditis arising without any discoverable exciting cause

-ut will find a dozen or more, where it is produced, brought about, and presents itself in connection with a case of acute rheu-matism. It is indeed of such common conjoint occurrence with this disease that all writers who have closely and particularly investigated the subject, speak of its connection with rheumatism after the manner of Watson.

Acute rheumatism above all others is indeed its great producing cause.

Bouillaud mentions pericarditis as occuring from an attack of this disease in one half the cases that fell under his observation. Some very able and judicious ~~observers~~ authors have pronounced this statement of Bouillaud to be an exaggeration

Making the proper estimate one in four those individuals who suffer from an attack of acute rheumatism under fifteen years of age, have pericarditis taken place and the rule, and its absence the exception.

Likewise very frequent causes giving rise to inflammation in this membrane are in ordinate pressure together with the infliction of blows over the region of the heart. or inflammation induced by contiguity from the lungs or pleura and from this cause children are much more apt to be affected than adults or those that are older.

The other causes of pericarditis which have been enumerated by authors, are just a sudden check of perspiration, and the cessation and suppression of habitual evacuations. Men are more subject to this disease than women in the proportion of four to one

Dr Copse says the foetus in utero may be attacked with this disease, and that in children who have died in forty eight hours after birth, the adhesions between the pericardium and the heart were so firm as to lead to the belief, that the pericarditis had existed sometime before its birth.

I shall next consider its anatomical characters.

Anatomical Characters of Pericarditis

The Anatomical characters of acute inflammation of the Pericardium are first, preternatural redness of the membrane, second, the adhesion of concrete lymph, and, third effusion of liquid serum within its sac.

Redness the first Anatomical character spoken of, is rarely diffused over the entire extent of that portion of the membrane involved in the inflammatory process. It occasionally presents itself in specks or patches partaking of a scarlet hue and all of which have commonly a mottled appearance making it look as if it were covered with little specks of blood.

The thickness of the membrane is seldom augmented the false which adheres very intimately to it has been mistaken for thickening of the pericardium.

When acute pericarditis assumes the chronic form it loses its bright color and presents a brown or yellow appearance.

Redness alone is not an infallible evidence of acute pericarditis. Since all membranes are liable to become congested from diverse different causes, unconnected & independent of inflammation, as happens from disease of the valves of the heart interfering with the return circulation, also from dilatation and &c & &c.

Laennec observes that in some cases of intense inflammation of the pericardium judging from the thickness of the false membrane (revealed by post mortem examinations) very slight redness exists. Hope thinks redness is always present during life but disappears after death attributing every instance in which this remarkable phenomenon takes place to recent inflammation, the blood not yet becoming impacted in the great vessels.

The subserous tissue in this disease like the mucous membrane of the stomach in cases of gastritis becomes pulpy & soft-

- and is peeled or scraped off with unusual facility.

The pericardium like the serous membrane which lies near it (the pleura) when excited by inflammation undergoes the same changes, its vessels secrete conjointly lymph and serum in a liquid state. Coagulable lymph is poured out upon the surface of the membrane. Either causing the pericardium in default of absorption of the coagulable effusion to become agglutinated to the heart, thereby arresting the further progress of the disease; or adhesion being prevented (which next to absorption of the entire effusion both of lymph & serum is the most favorable termination) the concrete lymph becomes a secretory surface, and effuses an additional quantity of serum thereby increasing the distensibility of the inflamed membrane until in a short time the functions of the heart becoming embarrassed

- and its action from the inordinate pressure being arrested death quickly arrives to liberate the patient from his sufferings.

In respect to the adhesive process - agglutination of the pericardium taking place in some instances and not in others much has been said by different observers attributing as causes, in those cases in which this adhesion is not effected. an imperfect quality and organization of the lymph, and also an unhealthy condition of the patient. Although as is stated by a very able and judicious author, this may in some measure be good logic nevertheless in all the negatived cases the principal cause and the universal one is owing to the interposition of the serous effusion, the serum preventing the direct approximation of the surfaces of the Pericardium. In consequence of which the adhesion is often found to occupy or rather exist over almost the entire

extent of the pericardium, whilst some portion remains unadherent depending on the presence of serum for its nonadherence which portion Hope has discovered by careful investigation to be most frequent, in the space, situated between the base of the heart and origin of the great vessels.

The adhesion again the serum being absorbed does not always include the entire extent of the membrane. Although the inflammation may have been universal the deposition of concretions, it might be only partial.

The attached surface of the pericardium is smooth, but its free border is rough, pitted villous and irregular, which according to the fancy of different observers has been compared to one and other things thus Wasson makes it like unto a wipe, dem in the butcher's stall, Farnine unto the pits and depressions made by separating two pieces of wood which have

-been buttered and placed in contact, by Corrisart its reckoned analagous to the stomach of a calf. The exudation of coagulable lymph upon the free surface of the membrane varies from a line to an inch in thickness.

The third anatomical character of pericarditis the effusion of liquid serum within its cavity

Serum is effused from the inflamed membrane conjointly with lymph and is sometimes found in considerable quantities. The lymph concretes and the effusion remains turbid & cloudy

The amount of the serum is extremely variable, occasionally exceeding a pint both Louis and Corrisart in one instance found four. Dr Hope in his admirable work on diseases of the heart page 158 states that this liquid effusion sometimes exceeds a pint in 24 hours after the inflammatory

- process has been lighted up. Whilst in others this effusion is so small in quantity as not to prevent the surfaces of the membrane from coming in apposition. The amount of this secretion is decidedly more copious at the onset of the disease diminishing as the violence of the inflammation subsides: and in some very severe cases there is no effusion whatever, whilst instead there is a free exudation of lymph which fills the whole pericardiac cavity, adhering the heart and great vessels to some portions of the pericardium, permanently agglutinating the entire cavity.

In the majority of instances one or other of this state of things takes place either the liquid effusion is not absorbed a fatal compression ensuing, or there being an inconsiderable quantity of serum present, the liquid having undergone absorption, the pericardium becomes

firmly attached to the heart.

The Serum is sometimes converted into pus, this is generally tho' in the Chronic stage, and in some very few cases pure pus is effused without any deposition of false membrane. In thirty seven cases of pericarditis Louis found that the effusion was serosanguinolent in five serous in nine sero purulent in fifteen and true pus in seven.

This serous liquid is generally turbid, occasionally lympid, and ~~sometimes tinged~~ tinged with blood.

We will discover upon a post mortem examination soon after the whole membrane becomes adherent to the heart, that the intimate bonds of connection are made up of lymph in which a number of small vessels are ramifying of an uniform pinkish vascularity ~~and~~ having the appearance of blood stained

A peculiar phenomenon observed in

-partial pericarditis is that it sometimes leaves no other trace of itself than four or five white and thicke spots of different sizes. About the origin and seat of these Laennec and M. Corvisart disagree Corvisart entertained the opinion, that the show themselves, without their having existed any previous inflammation in the sac, and that they are situated beneath the serous covering of the pericardium. Laennec on the contrary contends that they are the products of inflammation and that without inflammation no such things could exist, since an albuminous secretion cannot take place without it. And moreover remarks that their situation is upon the external surface of the membrane as he has been able to effect their removal with his finger. This is quite conclusive; Laennec's views are decidedly correct, and accord with the opinion of men of active research.

General Signs

The symptoms of pericarditis as described by authors are as follows, acute inflammatory fever (generally preceded by rigors) a peculiar expression of the features - indicative of anxiety and distress, which is not readily described but when once observed not easily forgotten, so strange and striking is this melancholic air, twice have I observed this distressing symptom in the wards of Bart. Infirmary (Cases Wheeler and Brown) this is attended with a severe shooting pain in the pre-cordial region, producing stiffness in the left shoulder, occasionally extending down to the wrist. The pain is considerably augmented by inspiring fully, or by pressure exercised between the corresponding ribs, but more especially up the diaphragm the fingers being placed in the right hypocondrium under the cartilages of the false ribs - Bouillaud says this pain is strictly

— dependent on pleuritic effusion. both Andral and Louis have observed severe rending pain in cases of pericarditis when there was an entire absence of any pleuritic complication. but Louis estimates that there is pain one half.

We next have as making the true — character of the affection inability of reclining on the left side, frequently the patient confines himself to one position which is generally upon the back (dorsal decubitus) with the above we commonly have palpitation of the heart the force and action of which in some cases assumes features which are diametrically opposed to those it presents in other instances. its impulse is sometimes strong — throbing and irregular, at others weak fluttering and irregular. In the onset of the malady, we have a frequent, full and hard pulse, growing smaller less full and weaker as the inflammation advances.

The pulse may be either regular or intermittent in the latter case we may consider the lining membrane (the Endocardium involved in the disease. The Endocardium like the Pericardium is a serous membrane and the sympathy existing between them is such that a generally received opinion among medical men is that pericarditis seldom or never exists independent of inflammation in the lining membrane of the heart (the Endocardium, and when pericarditis is attended with Endocarditis we have a perceptible bruit of the arteries all over the body, each action of the heart causing the blood to pass swiftly and violent under the finger making what is called a jerking pulse, this peculiar pulse is owing to Aortic regurgitation. To the symptoms above enumerated we have an appreciable sense of weight and uneasiness at the epigastrium, — a dry cough, and accelerated respiration.

Walson mentions delirium as an important symptom (delirium independent of any affection of the Encephalon) which is in a low form sometimes presenting a mild character, at others it is furious, and the patient is wild and obstreperous.

Hope mentions delirium as occuring in the last stages of the disease.

Dr Macleod in the Med Gaz. mentions three cases, when the symptoms of inflammation of the brain, diverted the attention from the heart (where intense pericarditis existed) to that organ (the brain) which was perfectly free from any trace of inflammation (as shown by post mortem examinations. Latham and Andral make mention of similar cases. So that in all cases of a severe inflammatory or febrile character, we should observe the rules laid down by Elliotson, viz to place our hand on the precordial region as well as pulse, and we will seldom or never be blinded in respect to the actual lesion.

The rational signs of pericarditis may be entirely absent, the affection being latent in such cases without the assistance derived from the physical signs we must remain ignorant of the true seat of the patient's suffering. I next purpose to review the physical signs belonging to this disease.

Physical signs.

When effusion is present in the pericardiac cavity to any considerable amount percussion elicits a dull flat sound over over a greater extent of the precordial region than the natural state of things permit and which is always proportionate to the quantity of this effusion it may be distinguished from hypertrophy of the cardiac structure by the following fact that in pericarditis when the region of the heart is elevated respiration cannot be heard whereas in a case where hypertrophy exists this is not observed.

It may also be distinguished from an effusion in pleurisy, from the circumstance of the percussion's being defined to the space of the heart in pericarditis, whereas in ~~an~~ effusion dependent on inflammation of the pleura no specific limitation is made.

We have in a vast proportion of cases this dulness accompanied with a bulging out of the space situated over the heart. This circumstance was first observed and shown to pathologists by Louis: by Bouillaud and Andral this vaulting up of the precordial region taken in connection with the ~~dulness~~ the preternatural dulness afforded by percussion is regarded as highly important evidence in making the character of the disease.

Auscultatory Signs.

Auscultation is of essential importance and satisfaction in diagnosticating this affection, it makes clear to the attentive and intelligent physician the precise amount of mischief going on within this hidden sac.

The ~~other~~ morbid sounds revealed by placing your ear over the region of the heart's location are two, distinct from each other, and depending on very different causes, pointing out the the diversities of operation and morbid processes which are at work in this portion of the tripod of life.

The first of this class of murmurs is almost pathognomonic of pericarditis, a sound which has been described by Watson and called a to and fro sound. Although to M. Collin is due the honor of giving the first clue to this important murmur, which he described in the year 1834 and compared it to the noise produced by the breaking of new leather ("Craquement de cuir neuf") Reithin Andral or Bouillaud met with it prior to 1835. Broussais attempted to describe this sound a little later than Collin and made it like unto the rubbing of parchment, but to Dr Stokes of Dublin is the medical profession

principally and particularly indebted for the active research he has shown, and the able ingenuity with which he has portrayed and beautifully illustrated the whole subject.

This friction sound takes place from the rubbing together of the surfaces of the pericardium upon each other, the natural smooth, and lubricated surfaces of the membrane being roughen by the deposition of coagulable lymph, and occasionally this murmur is produced from another distinct cause, which results from the agitation of the serous portion of the effusion between these roughened surfaces. A vibratory thrill is frequently found in connection with these murmurs. Stokes observed it in five cases out of six. This superficial to and fro sound presents a great many varieties of modification. We may have it from the soft degree of attrition approaching the bellows murmur or the rustling of silk, up to the harsh bones

produced by the rasping of a file or the sawing of a board. This remarkable sound is heard in the onset of pericarditis, before there is much effusion, or the effusion having undergone absorption, the roughened and irregular surfaces are permitted to approach each other. A distinguished Author has observed that when the effusion is slight, the friction sound is first commonly heard at the base of the heart. The diversifying character of this sound has been attributed to the amount and tenacity of the lymph, together with the serum intermingled and the force of the heart's action. Dr Williams says the attrition sound in well marked cases of pericarditis is almost always double or even triple, accompanying the systole and diastole of the heart. This peculiar sound is not of long duration, either the attack is fatal the the sound continuing up to the time of the patients death, or the lymph having been absorbed

the pericardium becomes permanently adherent to the heart, or this lymph becomes changed into false membranes which establishes bonds of connection between the Pericardium and the heart.

The other morbid murmur we meet with in this affection, is denominated the bellows or blowing sound. was first described by Latham who noticed it in 1826. This sound always denotes inflammation of the Endocardium, depending for its character upon the state of the valves they being red, swollen, and sometimes studded with the granulations or vegetations around their ~~fre~~ borders. This bellows sound according to Hope is only presumptive evidence and an indirect sign of pericarditis, since it bespeaks inflammation of the Endocardium and some derangement of the valvular apparatus. Watson says when inflammation sets up in the investing membrane, we seldom or never have an absence of coexisting

inflammation in the lining membrane.

Bouillaud also expressed himself in a similar manner. However this may be all writers agree in making this connection very frequent. This peculiar murmur is produced by the passage of blood through the contracted orifices of the heart, and again by regurgitation through these openings, alike owing to their constriction; the valves on account of their swollen condition not being capable of performing their office.

This sound Walson denominates rough a diseased whiz or rush accompanying the systole of the heart. Latham and Hope very strenuously insist that this murmur may be either single or double, that is may occur with the systole and diastole of the heart, the first murmur being occasioned by contraction of the aortic valve or regurgitation through the mitral, and the second murmur in all instances says Hope from the retrograde action

of the blood through the aorta.

This valvular sound is frequently heard before the bruit or sound at the very onset of the disease. The explanation given of this truth, is this that commonly we have as a consequence of the inflammation in the early stage (as before noticed) an effusion of serum which keeps the roughened surfaces from each other preventing as a matter of necessity the friction, since its production depends on the apposition of these surfaces.

Whereas the bellows murmur depending for its existence on inflammation of the Endo-cardium (this being a complication of peri-carditis in an immense majority of instances) gives rise to the valvular murmurs or bellows sound. Both the friction and bellows sounds replete with the most unbounded interest, and their intimate acquaintence of essential import-ance to the conscientious practitioner of medicine

I shall now attempt to describe the means to be made use of in combating this inflammation, and of radically supplanting the diseased action.

The affection being clearly diagnosed the first thing to be done in the way of treatment is to employ the lancet. Hope and Bouillaud, who have done more for the disease than any others, recommend as the first step in the treatment blood to be taken freely from the arm, and the application of leeches to the precordial region, and after reaction comes on, unless the pain be completely subdued, again must the leeches and venesection be resorted to. It will occasionally require 3 or 4 general bleedings. Bouillaud, with an unwonted zeal as is his custom, is over doing the thing, using the lancet blow upon blow until he effects what he calls the jugulation of the inflammation, or I suppose the jugulation of his patient's strength, death ensuing as an inevitable

consequence, notwithstanding Bouillaud's unparalleled use of the lancet, he deserves credit for that treatment, which is decidedly preferable to the expectant, the statistical accounts of intelligent observers prove.

Hope has been a single topical application* used very freely in Pericarditis

Purgation is a powerful adjuvant means to the above measures. the bowels should be kept open with saline or Hydragogue Cathartics. and among the agents employed for this purpose Sulph Mag. Tart potassa et Soda, Comp Jalap powd. and Ext. of Colocynth are the best. In addition to these, Diluent drinks such as Nitrate Potassa, and the Cupertartrate in ℥ii or iii in a quart of water, should be taken freely by the patient, Nauseating doses of Tart. Emetic, and the Tinct of Digitalis 10 or 15 gtts 3 times a day, may be administered with advantage. The other measures to be employed in the treatment of this disease

{ * from 7 to 20 or leeches. }

are more important than all the other means combined. What we principally dread is the formation of false membranes connecting the pericardium to the heart. and our object is to prevent these, by the administration of the antiplastic properties of mercury. Stokes, Hope Latham and others speak very highly of this agent. Hope gives mercury in the onset. 5 to 8 of Calomel or 10 to 15 Rl Hydr commencing after the first bleeding and the use of a purgative. Latham pushes its use still further, rubbing Mercurial Oint in the Axilla and Groin.

We should, keep our patients on the strictest and mildest diet, and make them observe the greatest degree of quiet. Having pursued this plan 4 or 5 days and after the first mitences of inflammation have subsided, we employ cups to the precordial region, following up their use by the application of blisters. ~~[illegible]~~ —

dressing them with Mercurial Ointment.
If this treatment be employed, and
the patient properly managed, it will
in most cases suffice to resolved acute
inflammation of the Pericardium.
proving the triumph of our noble art:
and the progress of our holy science.

An
Inaugural Dissertation.
on
PHTHISIS PULMONALIS

submitted to the examination of the
Provost, Regents and FACULTY of PHYSIC
of the
University of Maryland
for the
Degree of DOCTOR OF MEDICINE
by
J. Thomas. Hall, of
Annapolis Md

— February - 1847: —

To

William Power M.D.

Prof. of Theory and Practice etc

This paper

Chiefly containing the fruits of his instruction

is

Very respectfully inscribed

PHTHISIS PULMONALIS.

Many and innumerable treatises have been written on the subject of Phthisis Pulmonalis, but Bayle, Lannec and others have thrown especial light upon this most intensely interesting disease and the only thing that devolves upon me is to follow in the footsteps of those, who have made it their particular study and delight in investigating this disease. Every one knows the importance of this disease for it is one of the most fatal diseases that we have to deal with; rarely is it after the disease has once set in that the person recovers from its fatal grasp, it seems as if it was destined to be the conqueror of the different remedies of the physician. Phthisis is not be considered a disease of the lungs only, for it is constitutional, affecting other organs besides the lungs. It is contended and I believe rightfully too that the generating of tubercles in the lungs is somewhat connected with the scrofulous diathesis. Tubercles are composed of unorganised matter thrown off from the blood, of a yellowish colour, opaque friable and of about the firmness and consistence of cheese, this I

believe all pathologists have agreed upon as the genuine tubercular matter; it is generally deposited on the surface of mucous membranes and sometimes but not rarely among cellular tissue. It has been contended by some, that it is always of a round shape but this cannot be so, for it must depend altogether upon the tissue in which it is deposited, when deposited in the brain or cellular tissue, there being no inequality of pressure it preserves a globular form, but in the lung, the round form is sometimes real and sometimes apparent, it is real when the tubercular matter fills up a vesicle and therefore it takes the form of the pulmonary vesicle, and especially when the vesicles coalesce by the increase of deposit and compose one large mass; and the tubercular matter is very liable to increase in quantity by the continual accumulation of free matter of the same kind. The lungs are often found studded with a great many small granules of a firmer consistence, they are of a very firm consistence for it is said they are almost as hard as cartilage, semitransparent of a bluish-gray colour, they generally receive the appellation of "miliary granules" or the "granulations of Bayle", who I believe was the first who discovered their existence. A great variety of opinions are entertained in regard to

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[illegible] and [illegible] but [illegible] among other
[illegible]. It has been ascertained by [illegible] that it is [illegible]
[illegible] also, but the [illegible] is, for [illegible] [illegible]
[illegible] the [illegible] is [illegible] [illegible],
[illegible] in the brain or [illegible] [illegible] [illegible] [illegible]
of [illegible] [illegible] or [illegible] [illegible], but in the lung the
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] when the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] to take the form of the [illegible] [illegible], and [illegible]
[illegible] the [illegible] [illegible] by the [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] to [illegible] the [illegible] [illegible] [illegible] [illegible]
[illegible] of the [illegible] [illegible]. [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

their nature, Laennec says they are a nascent tubercle and Andral believes that they are some of the pulmonary vesicles rendered hard and solid by Chronic Inflammation; and Dr Carswell explains it in this manner, "The membrane lining the air passages secretes from the blood not only the matter of tubercle, but its own proper fluid; whence it happens that a dull yellowish point of tubercular matter becomes enclosed and set as it were in a small pellet of gray, translucent semitransparent mucus". Whatever may be the theory in regard to these bodies, it is certain that they have an intimate connection with the true cheesy tubercle, and it is equally certain that they both occur in the same individual, in the same lung and in the same portions of the lungs, one is very seldom found without the other and they both belong to the same disease under consideration, to wit, Phthisis Pulmonalis. It is remarked by Louis who I believe is admitted to be a very faithful observer, that the granules present, at a certain period of their growth, a central opacity. Dr Watson seems to think that Laennec's doctrine in regard to the relation subsisting between the gray, semitransparent granule and the yellow opaque tubercle well founded but he thinks

that Laennec was wrong in his statement that the softening of tubercles commence in their centres, but it seems to me that it is much more probable for them to commence at their centres and proceed to the circumference, than to soften in the reverse manner. When these tubercles soften down cavities are left which may cicatrize or become lined by a false membrane, these cavities are of different sizes but the average size is about as large as a pigeon's egg. Bronchial tubes opening into these cavities are generally closed up by lymph, in recent cavities they are lined oftener by soft mucous tissue but in the older ones they are lined by a true pyogenic membrane; the bronchial tubes leading to a tubercular deposit are inflamed, ulcerated and often dilated. The seat of the deposit is generally in the upper lobes about the supra spinal fossa of the scapula and the cavities are generally found at the root of the lungs and it has been said that the left lung is much more obnoxious to this deposit than the right, but there is such a difference of opinion among the auscultators that I am not able to say to which side the deposit belongs; and it is said that they are much more numerous and that they

that Demons were known in his statement that the dying by Natural consumes in their entrails, but it seems to me that it would more probable for them to consume by their eyes and breath to the vitreous humors. Then is infinite the natural numbers. Then the intuitive infinite demonstration. Then infinite infinite demonstration. Then infinite infinite demonstration. Then infinite

are largest in the upper lobes and that they also ripen here and prove soft first and ready to be expectorated, and it is consequently here that we have the most numerous and the largest cavities. The number and magnitude of the tubercles and cavities gradually diminish from the summit of the lungs. The tubercles often present a chalk-like appearance especially in those persons beyond the middle period of life and who do die of Phthisis, these chalky concretions may remain in the lungs inert for years and then may be spat up and when expectorated they denote the existence of pulmonary consumption and they also at the same time denote the chronic character of the case. Cicatrices are not unfrequently found in the lungs and perhaps having a slight fistulous opening depicting a little unless, proving that cicatrization and cure may and do take place in the pulmonary structures. When the tubercles are numerous or lie near to the surface of the lungs, adhesions are almost a universal occurrence and give rise to what is called adhesive pleurisy, but this attachment to the walls of the chest prevents a more formidable condition, the

perforation of the pulmonary pleura and the escape of the tubercular matter and air into the serous cavity, producing that worst kind of pleurisy which constitutes pneumothorax. As I have said before, Phthisis is not merely a lung disease, its local ravages are most obvious in the thorax; in the digestive apparatus we have changes and in the mouth, fauces etc we find a diphtheritic deposit, but it leaves in the abdomen traces of its destruction not less definite than in the thorax - the stomach becomes much enlarged and thinned, the mucous membranes are softened and puffed up; the follicles of the intestinal canal are frequently the seat of tubercular deposit and they become more frequent as you proceed down - when they ulcerate an irregular rough sore appears, adhesions however generally prevent the ulcerations opening into the Peritoneal cavity. The lymphatic glands are tuberculated - the Bronchial and mesenteric glands are affected by the tubercular disease. The liver too undergoes some change, a fatty degeneration often occurs so as when cut into, it greases the knife and hands of the operator, and it yields when heated an oily substance; its presence though is seldom revealed

during life except by percussion and pressure with the hand and it generally projects below the edge of the ribs.

Let us in the next place take into consideration the symptoms, at first they are of a depressed nature, very latent and exceedingly apt to escape observation, an inappetence for food or perhaps an apparent defect of nutrition precede the more marked symptoms, there is a general ill health, we have also a slight cough, hacking dry and at the same time irritating and at the same time we find it a very obstinate symptom, the cough generally comes on in the morning or during the day when the patient makes any undue exertion, it seems as if it was caused by something irritating the throat, and it will commonly cease for awhile, for instance, during the warm weather of summer and come on again during the winter, when the temperature is low. It comes on to be troublesome during the night by depress and also to be attended by more or less mucous expectoration, when such a cough steals upon a person gradually and when no cause can be assigned for it, that fact alone is enough to awaken the suspicions of the person as to its true cause and nature. But the cough is not

always a leading fact, for a chronic cough may exist without the intervention of tubercular disease in the lungs, so vice versa, phthisis may exist and even prove fatal without there having been any cough, but this is very rare, for cough is usually present in a more or less degree during all the stages of phthisis and it is this symptom which mostly distresses and harasses both the invalid and family. Dyspnœa is another symptom, but not so important one, any exertion or exercise will produce it, but it does not generally get to its height till towards the termination of the disease. It is often found that patients who fear and are unwilling to believe that their lungs are affected with tubercles, are always willing to try and deceive themselves and others, by taking a deep inspiration so that they may be able to distend their lungs as much as possible, thinking that they will get the opinion that their lungs are not diseased but in a perfectly sound state. Dyspnœa varies a great deal in different persons, there is also felt a sense of weight oppression, tightness or constriction. A very slight pain is apt to be felt about the roots of the lungs and also

a slight dull aching pain under the clavicles or scapulæ, but pain in the chest is not solely relied upon.

In every two out of three cases on an average has hæmorrhage as a symptom and when present it is a very important symptom and should awaken the suspicions of the attending physician, for without a person has had a blow on the chest, it is a most sure sign that the lungs are affected with tubercles. In former times great attention was paid to the expectoration in those who were suspected of having phthisis, it was thought that if a patient spat pus, he was in a state of confirmed phthisis. But I think that it is generally conceded now that pus may be secreted from the inflamed bronchial membranes, so that we may dispense with that false idea which was entertained by those of ancient times and say that the absence or presence of pus in the sputa is no test whether there are tubercles in the lungs or not. When the sputa becomes less frothy and more plain and greenish it marks the incursion of the second stage, that of softening, and sometimes portions of tubercular matter may occasionally be found in the expectoration.

a slight dull aching pain under the clavicle or shoulder
but pain in the chest is not totally absent upon
[illegible] of these cases or on account of the
[illegible] or deep pain that when present it is very
[illegible] by patients and therefore [illegible] the
[illegible] of the [illegible] the patient is [illegible]
[illegible] on the other side. This is [illegible]
[illegible] the lungs are affected with [illegible] or [illegible]
[illegible] point of the lungs is the [illegible]
[illegible] there is [illegible] by [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

Dr Watson in his able lectures on Phthisis, and to whom I am indebted for many of my ideas in this thesis, says "The sputa most characteristic of tubercular disease consists of globules. flocculent masses, which look like little portions of wool than any thing else", this kind of expectoration I believe commonly marks a confirmed and advanced stage. The important symptom to which I shall briefly advert, is hectic fever and it is very apt to creep on the patient insidiously. It is generally preceded by chilly feelings coming on towards evening, and during the night the palms of the hands and soles of the feet will become dry and have a burning sensation and in the morning a profuse diaphoresis occurs, The most marked symptoms are to be found in the perspiration and in the pulse. This symptom seems to have a very close connection with the sleep of the patient, it is very seldom that it has been known to come on while the patient is awake, but the patient always finds, after he has been asleep that the perspiration has been very profuse, it is generally most copious about the head and chest; this symptom is very distressing to the patient causing him to dread going to sleep: this most distressing complaint tends to the rapid

Dr. Hutton in his notes to Jones's Philosophy, says he never was indebted for money of any person in the Principality, "the expense excepted of little service discovered of particular Phenomena, which, like little tinges of metals, show they exist, but shew of themselves scarcely worth a separate and second notice at stage." The Dr. proceeds thus, perhaps to conceal his ignorance, in fact, Jones never at a very early age, he proved to the Doctor conclusively. It is generally presumed by philosophy students, to towards morning, and during the night the Doctor of the Church-and Rector of the first with from day and from a morning Meteorologist. And in the morning a person discovered a very superior merit to present in the Hypothesis made in the Doctor. This Hypothesis Meteorologist from a very close connection of the Day of the Doctor, it is very evident that it Meteorologist to come [illegible] the Doctor, but the Doctor [illegible] Jones, after he [illegible] the Hypothesis [illegible] Hypothesis, it is [illegible] explain about the Hard and [illegible] this Hypothesis is very interesting to the Doctor [illegible] Doctor: this most interesting [illegible] Jones's [illegible]

exhaustion of the strength and betokens when persistent or copious a short duration of the disease. The pulse is nervous, irritant and frequent, and it is a symptom so generally present in "phthisis pulmonalis" that almost too much importance has been ascribed to it as a diagnostic sign, the pulse generally is above ninety and much more, and, when there is nothing to account for this frequency it is a suspicious symptom. Another symptom and one which is common and an extremely ugly symptom in Phthisis is Diarrhoea when it attacks one and the patient being of an habitual costive habit, and the bowels become relaxed and one is undetermined only suspecting from other signs that the patient may have incipient Phthisis, this change often set its seal upon the nature of the disease. But generally however diarrhoea does not become urgent until the disease is far advanced and has already declared itself by other and unequivocal symptoms. Though when it does occur, it is apt to harass the patient and his strength and flesh wastes away rapidly. Diarrhoea seems to depend mostly upon copious ulceration in the small intestines and in the colon; Dr Watson says "that with this disease of the intestinal canal

[illegible] of the stomach and intestines, [illegible] or
[illegible] a sort of inversion of the stomach. The pulse is so
[illegible], irritant and frequent, and it is a very [illegible]
usually present in [illegible]. Infants who [illegible] to
[illegible] in the first month [illegible] are [illegible]
[illegible]. The pulse generally is above ninety and sometimes
[illegible], unless there is nothing to [illegible] frequency
[illegible] a disproportionate degree. The tongue often becomes
[illegible] is [illegible] and [illegible] very red and the papillae
[illegible] of the stomach [illegible], and the bowels [illegible]
[illegible] and are in a distressed and irritable state
[illegible] the skin that the [illegible] may [illegible]
[illegible]. The skin is often hot [illegible] the [illegible]
of the disease. Child generally becomes [illegible] the
[illegible] or [illegible] the disease is for [illegible]
and [illegible] [illegible] [illegible] [illegible]
[illegible]. Although [illegible] [illegible], it is not [illegible]
the patient and this strength and [illegible] [illegible]
[illegible]. [illegible] [illegible] [illegible] [illegible]
[illegible] in the blood [illegible] and in the [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

there is often found an enlargement of the corresponding glands of the mesentery which are frequently filled with tubercular matter". Nearly all the symptoms which have been considered in the foregoing pages conduce to cause another constant accompaniment of Phthisis and that is emaciation, emaciation is one of the earliest symptoms as it is the most alarming which the patient presents and if it is not cut short before it has reached its termination it is extreme. Oedema of the ankles together with some puffiness of the hands and face are circumstances which seldom fail to appear in Phthisis, it does not tele us what the disease is in such cases, but it points out to us that the disease is about to terminate, it is a very good prognostic sign.

Physical signs- Simple inspection of the chest at the very early stage is not so satisfactory, but during the progress of the disease, the clavicles become more prominent from atrophy of the soft parts which lie contiguous, the pectoral and intercostal muscles become atrophied leaving the ribs prominent and visible. Percussion, above the clavicles in the supra and infraspinal fossa, gives us dullness. I believe if a portion of the lung be rendered solid by

common inflammation or by the presence of tubercles, the result so far as the auscultatory signs are concerned will be the same; if the solidification be complete no vesicular breathing can be heard, but bronchial breathing and bronchophony will be audible in each case, if the solidified portion encloses a considerable bronchus and comes near the surface of the chest. Upon auscultation the respiratory murmur may be heard forcibly upon the affected side. The gradual swell of the vesicles during inspiration is not regular and continuous, but jerking with interrupted intervals. As the disease advances friction sounds in the chest may be heard similar to the rubbing a lock of one's hair or the rubbing of a bank note, there is also an increase of the vocal thrill upon the affected side. A click is often to be heard, (perhaps even by the patient if he be lying still) at the close of inspiration caused by air bursting through a softening tubercle communicating with a bronchial tube.
In the second stage when we have softening, inflammation and ulceration, the symptoms vary, the expectoration is free - streaked, greenish

[illegible]

[illegible]

[illegible]

and less frothy than in the first stage — The sputa becomes heavy and consistent (sinking when spit into a vessel of pure water) and has ragged edges. Haemorrhage becomes less common and abundant than in the first stage; and then it is that we have pleuritic pains, which are caused by an extension of the inflammation. The chest becomes very much emaciated, the intercostal spaces depressed so as to make the ribs become more prominent; the vocal thrile is increased in the diseased side and when we percuss we find dullness. We also have bronchial respiration and an absence of the vesicular murmur; the respiration becomes hollow and cavernous, caused by there being vomicae or cabities in the lung, these cavities have been known to yield different sounds and Dr Latham explains the different sounds in this way" The varieties of cavernous breathing are doubtless owing to different sizes, and forms and situation of cavities and to different conditions of the surrounding lung. A cavity may be very large or very small, several bronchi

and then pouring them in the final stage. The final
reserve heavy and overnight (this being when
light ale is served of four barrels, and has dropped
edges. Throughout reserve the consumer made
[illegible] then in the final stage, and then it
is filled in from Burton's Pions, which are used
by our customers of the Pumpstation. The ale
reserve very much increased, the interpreter
[illegible] depressed so as to make the ale reserve
more prominent; the vessel thus is increased in
the [illegible] side and when we pressing we find
[illegible]. We also have [illegible] [illegible] our
[illegible] of the [illegible] [illegible]. The [illegible]
[illegible] reserve [illegible] and [illegible], [illegible] by
[illegible] having [illegible] [illegible] to the [illegible]
[illegible] [illegible] been [illegible] to [illegible] [illegible]
[illegible] and [illegible] [illegible] [illegible] the [illegible]
[illegible] in this way. The [illegible] of [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

"may open into it or only one. It may be a simple cavity or it may have many chambers. Its sides may be condensed and equal or rough and ragged. The lung around it may be solid and indurated or pervious and vesicular. It may be near the sides or far from them, adherent to or seperate from the pleura. It is quite obvious that these different circumstances are calculated to modify the sound, which will nevertheless be always such as indicates a cavity." A tubercular cavity may be so large and of such a kind as to yield the metallic sounds which are apt to be heard in pneumothorax, I should think that the vomica that gives out the amphoric resonance and the metallic sounds must be an exceedingly large one. The voice is also modified if the cavity be of considerable size and near the surface and has dense walls and at the same time together with these be empty, the sound, which we hear in the part over the cavity, is called pectoriliquy; the voice is distinctly articulated in the ear of the listener as if it proceeded from the chest. Pectoriliquy does not

always indicate the existence of consumption, for the pulmonary tissue may be rendered more dense and solid by other diseases than tubercles; it is said that wherever actual pectoriliquy from a cavity is heard, there also will be heard cavernous respiration. The sounds should be well marked before a physician should determine the disease, for other sounds may very nearly resemble those which have been enumerated and without a person has educated his ear well to the different sounds of the lungs he must be careful in his diagnosis, he must not make too hasty an examination, for upon their exact appreciation and correct interpretation will depend the opinion which one will be called upon to express; an opinion too which always distresses the family. Therefore a physician and especially a young physician should be extremely cautious and should consider well and never be too hasty whether the signs should be extremely simple or not, for it is in the early stage of the disease that the physician generally has any hope of saving his

always indicate. The question of consumption, for the future, may have now be resolved into disease and death by other diseases from tubercle, it is also after intervening periods from a cause to from a. These also will be both common respiration. The bowels should be well marked before a diagnosis should attend the disease, for other bowels may early re- semble this unless there have commenced and continued a period from a cause to the different periods of the lungs. It must be con- fined in his diagnosis, he must not venture too far in a consultation, for upon this depends a diffe- culties with correct interpretation with regard the opinions which one will be called upon to express in his in the medical profession. Diagnosis and especially a diagnosis should attend the bowels and should be well marked before a diagnosis can be made. It is the early stage of the disease. Then a diagnosis generally then may take of having the

patient, either by science or by change of climate, from the ravages of this most grave and direful disease. In the second stage we have fever which is not generally present in the first stage, but it is exceedingly common in the second and it is continued with slight exacerbations - they may be of the quotidian, tertian and even double tertian type. We have also spontaneous vomiting of mucus and bile as from a secondary gastritis; the tongue becomes red and aphthous and sore. And if the epiglottis becomes ulcerated we have pains above the thyroid cartilage and of course difficulty of swallowing arises as a consequence; if the vocal chords be ulcerated the voice is hoarse and indistinct. The menses become irregular and indeed this is one of the first symptoms of approaching phthisis in females. We have during the progress of the disease marked periods of melioration giving the patient frequent but unfounded hopes of recovery. After thirty years of age, phthisis is generally more protracted and slow - fever is the essential cause of its duration, being long or short according

to the degree and countenance of the febrile disturbance. Phthisis may take the acute rapid form seldom lasting over six weeks or two months especially in Tropical climates, for all the ordinary symptoms are intensely aggravated, Pneumonia is set up in these cases which is supposed to exert an extreme influence in carrying off the patient. Persons advanced in age are more apt to be the victims of the Chronic form and may even die of some intercurrent disease.

As a general rule women succumb to the disease sooner than men; and youth (between eighteen and twenty) generally presents the rapidly fatal form, in both of these cases it is no doubt that the rapidity of the disease is owing to the feeble and weak constitutions, in the youth the constitution has not become perfectly matured and in the women the constitution being not of such a strong and robust a one as those of men yield to the ravages of the disease without much check. Sometimes intercurrent Pneumonia or Pleurisy may aggravate the Phthisical tendency

violent inflammation of the Pulmonary parenchyma as well as large pleuritic effusion which the general debility of the patient forbids any treatment with ordinary activity or success.

Prognosis should be necessarily grave, still well authenticated cases of cure are advanced by authors and physicians of extensive practice in large Hospitals as well a private practice who could hardly have been deceived. I will not have to go farther than to our esteemed and learned Professor of Practice in this University to bring an instance of such cases, he relates he met a gentleman several years ago in Paris and went with him to see a learned Professor, who after examining him and discovering from the sounds that he had a very large cavity in one of his lungs, he advised him to return to this country and die among his relations and friends rather than to remain on the other side of the ocean and die among strangers, but the gentleman did not heed the advice, but determined as he was in that part of the world he would see something

of it; and he took a tour on foot through Switzerland during the summer and spent the following winter in Rome and returned to Paris and he was convalescent, I believe every trace of the cavity had disappeared and it has not been a year since he met him and he was in perfect health. Where the prognosis was grave but as if in despite, nature rallied and restored the invalid to perfect health, there is no doubt that the physician in this instance was one of the best auscultators in France and made no mistake in the Diagnosis, and he felt himself obligated to give the advice he did, and if the patient had followed out the advice given him, he would now be recorded among those that were and not a living monument of phthisis pulmonalis as he is now; thus it is that many are consigned to an early grave without anything being done except administering "placebos". I believe in the words of our learned Professor "that Phthisis Pulmonalis is curable" and the day is not far distant I hope before it is under as great a check as "Intermittent Fever" is now. Cicatrices are often observed in the

bodies of those who at one period of their life exhibited marked symptoms of Phthisis and indeed the steps of the cure may be traced during life. The Prognosis should be grave in persons of a scrofulous and depraved diathesis, it should be grave also in those whose circumstances forbid us to expect the care and attention and assiduity of those in the higher ranks of life. So fatal is Phthisis that Death is the rule and cure the very infrequent exception. I think enough has been said on the prognosis in this fatal disease and I shall pass on to the consideration of the Predisposing causes. Phthisis is seen at all ages, it is most common from four to seven years in early life, Prof. Power says that about one fourth of children between those years die of tubercular disease; the next period of life in which it is very common is from eighteen to thirty five. It is a fact which is generally admitted that five women die of phthisis to two men. The most robust and hale constitutions not unfrequently succumb to it, but those of a scrofulous habit are more especially and intimately subjected to this disease.

Negroes, mulattoes and the mixed races are very much prone to this disease. A cause which exerts a considerable influence is hereditary predisposition and it is very manifest where it is conveyed from the parent to the child for they are liable and will fall into a phthisis when any slight cause arises, this has been noticed by the most celebrated physicians of ancient and modern times it is said that this disposition principally consists in a bad conformation of the solid parts or such a laxity of the fibres and vessels as is insufficient with a proper effort to promote the motions of the fluids conveyed to them; but this is not the general rule for the tendency is in as many cases acquired. Laennec supposes the seashore less predisposing to Phthisis than large cities and not so common in miasmatic districts. Closeness of habitation misery, vice, impure air and want of good light etc are active predisposing causes. Persons of slender and tender habits of tall stature and who are between the eighteenth and thirty fifth years of their age are highly subject not only to

a spitting of blood but also to Phthisis, for the vessels of such persons being very tender are consequently easy of expansion. It has been said that Phthisis is produced by an unreasonable drinking of spirituous liquors, for all the disorders incident to the breast and especially spitting of blood and Phthisis are somewhat affected by spirituous liquors, whether though spirits has any influence as a predisposing cause, I am not able to answer in this place. I think I have noticed in a cursory manner nearly all the predisposing causes, and if I have not, those which I have had under consideration are the most important for one to take notice of in the study of this disease and as I do not intend this as an essay to compare with those which have been written and published, for I could not advance anything new but would have to follow as I have been in the well beaten path and only give the ideas of those who I am indebted for this much. The next and last thing which I shall take notice of, is the treatment. No disease has been more frequently treated by authors and with a greater

variety of medicaments than Phthisis pulmonalis, some considering it the result of a neglected catarrh push on the antiphlogistic treatment, others considering it as necessarily fatal under the best and most approved mode of treatment confine themselves to a neutral ground and the administration of "placebos". One word in regard to the practice which has been used and is still used in some parts of the United States and I expect in every portion of the Union and possibly in the whole world, but this I cannot answer for. In regard to the administration of "placebos" which I believe is mostly used by the physicians of long standing, for I am sorry to say I have seen it in some cases and heard of others, and shocked am I to say it of the profession upon which I have entered, a profession which stands second to but one on this earth. It seems that when these long standing physicians come to the conclusion that one has phthisis they do not attempt to prevent the disease from proceeding any farther, but give the patient up as lost that nothing can save him from the iron grasp of the disease, their only efforts are to suspend the suffe-rings of the patient for awhile and cause the person

to think they are doing every thing which our noble science offers in the way of treatment; it is true they are giving medicines, but are these active medicines which they are using? no, no. they are medicines which are termed "placebos" only given so the persons may think you are doing some=thing and in fact they are doing nothing, but I hope the day is not far distant before a new light will be diffused more universally in regard to the cure of phthisis. And I think the time is near at hand for this mal practice to be put a stop to and these half murderers exposed to the contempt of the profession. Thirty years has modified greatly the opinions of the enlightened members of the profession (with some few exceptions); the disciples of Broussais at that time considered the tubercular deposit as the result of chronic inflammation and they used the anti=phlogistic treatment; the mercurial course was also highly in vogue, this however was soon found to hasten the crisis and aggravate existent symptoms and mercury is now considered as hastening the softening of tubercles which were before but crude. Dr Latham divides Phthisis into the "mixed" and "unmixed" forms, the treatment being necessarily modified according as the phthisis is

simple or complicated. Setons and issues, moxas and blisters were in vogue and are now only used when pleuritic and obstinate pains persist to the great annoyance and weakening of the patient. The inhalations of gaseous mixtures of Iodine, Chlorine and Creasote et similia have lately been much vaunted - they are however judiciously in the very early stage and when only a small cavity exists when they may act as an adjuvant to other means to bring about cicatrization. Iodide of Iron - arsenic preparations of steel etc are very serviceable at the different periods of the disease; the entire class of expectorants and stimulants have been severally tried and urged upon the profession. It has been suggested by a physician of London to endeavor to produce an artificial emphysema, which he supposes to act as a prophylactic, whether this is the result of a long and successful treatment or whether it is mere theory, I am unable to say. How then is a cure (for a cure is possible) to be secured? is the question which arises, not by the the administration of innumerable drugs but by a judicious hygienic and abivitant treatment, roborant means must be used; build up the disordered assimilative

function – endeavour to furnish well blood and enjoin a strict avoidance of every exciting irritant cause.

Change of climate, is very serviceable especially in the early incipient stages, (but beware and send not the patient abroad when the last stage of the disease has approached but let him remain among his friends and relations and die rather than he should die among strangers) to a southern and more genial clime, indeed the evident improvement so often observed to follow a change of residence is in a great part to be attributed to the exercise, pure air and altered habits and sensations of the patient consequent upon a foreign tour. Sea voyage in a mild latitude is recommended as especially serviceable as well as dwelling on a seacoast, an abundance of good nourishing easily digestible food carefully avoiding excess.

Equitation, which the patient can enjoy without dyspnoea caused by simple walking, is strongly recommended by the most skilful physicians of the past and present day. Its chief advantage seems to arise from its allowing the enjoyment of pure fresh air, the more temperate and serene the air is, the more beneficial it is to Phthisical patients.

It seems Sydenham was very much prejudiced in favor of horseback exercise, he considers it as efficacious in Phthisis as quinine is in Intermittent fever but I think the Dr goes too far in his prejudices for I believe this kind of exercise of great value in Phthisis but not so efficacious as the Dr thinks. A life upon the western prairies in our own country has been found productive of the greatest benefit and in some cases has caused entire recovery. Pure country air, milk, light farinaceous diet and abstinence from tea and coffee will be found very beneficial to Phthisical patients. Light bleedings, cupping etc when slight intercurrent Pneumonia or Pleurisy arise, are of the greatest service. When the cough troubles the patient give Elm bark; and when the expectoration is restrained Prussic acid, Tolu et Gum Ammonia are highly recommended to be given, but the Prussic acid must be used with extreme caution, possessing as it does a direct and most powerful tendency to subdue the irritability and sensibility of the patient and it is very apt to produce prostration. Morphia is about the best anodyne and narcotic one can use in this disease. If there is great pain in the chest rub Stokes Liniment or Croton oil on

the chest. In cases of Hæmorrhage use Acetas Jinciomm opio; and when night sweats attack the patient use Tinct Ferri Muriat and Sulphuric acid, but the acid is not adapted to all cases. When Diarrhœa comes on give acetate of zinc in combination with opium.
The diet should be a mild farinaceous one such as, Iceland Moss, Rice & similia. In hectic fever give Digitalis to lessen the pulse and force of the arterial circulation. The patient should drink some Chalybeate water during the several stages with a supporting diet.

J. Thomas Hall

An Inaugural Dissertation, On Phthisis:

Submitted to the Examination of the Prevost, Regent, and Faculty of Physic of the University of Maryland; for the Degree of Doctor of Medicine;

by

L. Austin Sperry:

1847.

To

Dr. J. R. W. Dunbar,

This dissertation

Is respectfully inscribed,

In admiration of his professional abilities,

And esteem for his manly virtues;

by his

Grateful pupil,

The author.

A patriarch among the evils which issued from Pandora's box, as terrible now as when the fathers of our art first drew its ghastly profile, Phthisis continues to scourge humanity. Working, with a vigor against which the combined efforts of the league Iatrian since the days of Hippocrates have availed little, its "fatal ravages among the young, the most gifted, and the most beautiful of our race," it rears its front among us, a very Dampson of diseases, unshorn, we might almost say, of a single lock: for, although much has been done by Andral, Laennec, Louis, Cruveilhier, Latham, and other eminent moderns, toward clearing away the mystery which so long enveloped the pathology of the disease, but little improvement has been made in its therapeautical treatment, and the boasted light of the nineteenth century has revealed nothing more efficacious for its cure than is contained in the simple and concise directions of terse old Celsus. Latter-day gen=

tlemen of vast scientific attainments and sagacity, have traced the monster to its secret haunts, and described every spot upon its motley crest; but they have neither killed the snake, or scotched it.

So insidiously does Phthisis accomplish its march, that its unsuspecting victim is scarcely ever aware of its presence until it has so far progressed that destruction is inevitable; and then the first intimation of the character of the disease is a sentence of death to the unfortunate invalid.

The general symptoms of this hopeless malady are —

1. Cough. And this may be for a long time so slight as not to be a source of much uneasiness or anxiety to the patient. It may only be felt upon making some unusual exertion, or on rising from bed in the morning, and may sometimes, during mild and warm seasons, disappear entirely for a considerable period; but it at length

returns; becomes constant and harrassing, and is accompanied by frequent expectoration of viscid mucus.

2. Haemoptysis. This is a frequent, and sometimes the most prominent, as well as the most alarming symptom, of tubercular disease of the lungs—occurring in its first stage, as often as once in every three cases. It may be so slight, and appear at such intervals, as barely to create a suspicion of the nature of the lesion which gives rise to it; or it may be so copious and frequent as to cause rapid and fearful sinking of the powers of life.

3. Dyspnoea. This, though almost always in some degree present, is not a very marked symptom in the early stage of the disease; and, indeed, sometimes throughout its whole course, the breathing may continue tolerably free and unembarrassed.

4. Frequency of pulse pretty constantly attends the progress of the disease. There is often, alas, other evidence of febrile action,

which, like the cough, is slight at first, and may be suspended for a period.

5. Emaciation — which may be rapid or gradual, according as the disease has assumed the acute or chronic form. It is always, however, strikingly apparent.

6. Pain. This symptom is not always present, or is very slight. In the first stage of the disease, it may occur, dull, aching and rheumatic in its character, between the shoulder-blades, or under the clavicle. In the second stage, it indicates the superventeon of dry-pleurisies, and is therefore pleuritic in its character.

7. Nummular Sputa. "Globular, "flocculent masses, which look like little portions of wool more than anything else. When "spat into a vessel not containing water, they "assume a flat circular form like a piece of "money, and remain separate and distinct "from each other." This symptom indicates an advanced state of the disease. The sputa

may contain, also, portions of tuberculous matter, in small, cheesy particles, or may be purulent.

8. Hectic fever.

9. Profuse perspirations, coming on principally during sleep, and rapidly exhausting the patient's strength. They are most copious about the upper parts of the body.

10. Diarrhoea. May be present from the first, but is usually a distressing symptom towards the close of the disease. It results from scrofulous ulceration of the glands of the intestines, or the presence of tubercles in the mesenteric glands.

11. Aphthae, appearing on the mucous membrane of the mouth and tongue, and—

12. Œdema of the ancles, with some puffiness of the hands and face, are among the last symptoms. They are the heralds of speedy dissolution.

These are, in brief, the general symptoms of Phthisis; but although collectively they afford sufficient grounds for forming a diagnosis, they

are not always thus present, and not always distinct when they are present. Separately, not one of them is an absolutely pathognomonic sign of the disease. Cough may proceed from the stomach, or may be the result of bronchial affections unconnected with tubercular disease; haemoptysis may be vicarious of some healthy discharge; dyspnoea is more frequently a symptom of other thoracic diseases, than of the one under consideration; emaciation may arise from defective nutrition consequent upon various organic lesions; numerous disorders may equally occasion hectic fever, exhausting perspiration and diarrhoea; and even the mummular sputa, to which so much importance has been attached, has been shown by Dr. Watson to be sometimes an accompaniment of bronchitis. How, then, in absence, or obscurity of some of these symptoms, are we to determine the nature of the disease with which we have to deal? Why — thanks to the genius of Auenbrugger and Laennec — we have physical means, which, properly used, are al-

most infallible. These are, auscultation, percussion, palpation and inspection. Morbid anatomy teaches us that the portions of the lungs which are first the seats of tubercles, are the apices of those organs; and, in by far the majority of cases, it is the apex of the left lung that is first implicated. To this rule the exceptions are rare. If, then, we use the physical means enumerated, over the summits of the lungs we can obtain accurate information of the nature and extent of the mischief which may be going on there.

The signs we derive from inspection are, in the incipiency of the disease, slight emaciation of the chest, with retraction or hollowing of the integuments under the clavicle; these, as the disease progresses, becoming more apparent; the ribs projecting, losing their elasticity, and moving but little in respiration. Palpation, where the lung is impermeable to any extent, will give us increase of the vocal thrill.

The sounds elicited by percussing a phthisical lung are —

1. Dullness, occasioned by the solidification of a portion of the lung from the presence of tubercles.

2. Unnatural resonance. If we have this circumscribed, and at the top of one of the lungs, we may be pretty sure that there is a cavity at that spot, occasioned by the softening, and expulsion of a portion, of tubercular matter. If, however, it be diffuse, and met with in any portion of the chest, there is room to suspect that it proceeds from dilatation of the bronchial tubes.

The auscultatory signs of phthisis are —

1. Feebleness, or absence of the vesicular murmur in that portion of the lung which has previously yielded a dull sound on percussion.

2. Harshness of respiration on the affected side. It is hitching or checked, and the expiration becomes longer, resembling expiration in duration. Bronchial respiration be-

comes tubular, and there is increased resonance of the voice and cough. (The bronchial sounds are modified, in the different sides of the chest, by the difference in the length of the tubes — the right bronchial tube being the longest.)

3. Pectoriloquy. This may be equally present, whether the lung be rendered impervious by the presence of crude tubercles, or whether a cavity exists.

4 Gargouillement, or gurgling respiration. This is a sound something similar to that of the large crepitation met with in bronchitis, but much louder. It is caused by the air bubbling through the liquid of a half-empty vomica. It is well to bear in mind that gargouillement may also result from the presence of liquid in dilated bronchi.

5. Cavernous respiration. This indicates a cavity without the presence of liquid.

6. Amphoric resonance, and metallic tinkling. These sounds are more peculiar to pneumothorax, which sometimes occurs

as a complication of tubercular disease. They may be heard in a vomica, where it is unusually large; but this is so rarely the case, that Dr. Watson states, he never met with more than one instance.

These, then, are the physical signs of phthisis. But these, also, like its general symptoms, may be obscure, and Dr. Watson, with his usual clear and concise language, thus cautions his readers: —

"When the sounds are not well marked, take time before you pronounce an opinion respecting them. Strong broncophony comes very near to weak pectoriloquy; bronchial respiration may closely resemble some variety of cavernous breathing; large crepitation confined to a small spot, may simulate gurgling. It is better when the sounds are thus equivocal, and when they may denote conditions so very different in their nature and tendency, to suspend one's judgment, and give a guarded opinion."

In making up our diagnosis of this disease, we may be materially assisted by enquiring into the patients previous history — by ascertaining whether he has been liable to certain pectoral complaints; (the occurrence of a double pleurisy being almost pathognomonic of the presence of tubercles); or, whether there be reason to suspect the existence of an hereditary predisposition to the disease. We should also note whether he be cachectic, or exhibit the marks of the scrofulous diathesis, with which the disease is so intimately connected.

With this curtailed, and necessarily imperfect, outline of the diagnostic phenomena of phthisis, we shall proceed to the consideration of its treatment. In the commencement of this dissertation, we stated that but little improvement had been made in the treatment of phthisis since the earliest days of medicine. How far we were correct in this, may be seen by comparing the alpha

with the omega; or, in other words, the pithy suggestions of Celsus with the somewhat more detailed, but almost as unsatisfactory, method of Dr. Watson. Of course, when we speak of the treatment of phthisis, we do not allude to those palliative means which are directed to its most urgent symptoms and complications, and that with no other views generally than to smoothe a dying pillow; but to that remedial plan, which, upon the presumption that the malady is curable, is directed against the disease itself.

The chief, and most hopeful, agents that have been made use of in all times for the cure of phthisis are, change of air, judicious exercise, and modifications of diet. And pretty much the only advantage of modern treatment over that of the ancients is, that our better acquaintance with the diagnostic signs of the disease enables us to apply these means earlier, and, by consequence, with the greater chance of success.

It has been, and with some who glory in the appellation of intelligent practitioners of medicine, even now is, a mooted question, whether consumption of the lungs be curable at all. This is conclusively settled by the discoveries of the present century. That tubercles have been deposited in the lungs, have softened, and been expelled; that the lungs have healed up, and been restored to almost pristine integrity, we have ample proof in the post mortem appearances which those organs frequently present. The symptoms of phthisis having been markedly present, and having disappeared during life; and cicatrices, which could be referred to no other cause, having been found in the lung when death has supervened upon other disorders — are facts sufficiently strong to convince a reasonable mind that phthisis has been cured: but whether by the remedies of our most worthy art, or by the simple vis medicatrix naturae, is a matter that will admit of some cu-

troversy. For our own part, we are disposed to credit the assertion of Laennec, that phthisis is curable by art, and that, too, when no inconsiderable portion of the breathing apparatus has been crippled. At least, we are convinced, from our limited information upon the subject, that the disease, by judicious management, has been kept in statu quo — that its fatal termination has been for a time postponed; and therefore it is not unreasonable to suppose that it may be postponed indefinitely — kept in statu quo, at least till the patient, in the ordinary course of events, reaches a tolerably advanced age.

Among the various plans of treatment recommended by practitioners of the present day, we shall select for our guidance, until the progress of science shall furnish a better one, that laid down by our respected lecturer upon Theory and Practice, Professor Power — not neglecting, of course, whatever may seem hopeful in the suggestions of other

eminent teachers.

As near as memory serves us, Dr. Power's advice is, to avoid mercury, as well as bloodletting and the antiphlogistic regimen, unless there be inflammatory complications rendering them indispensable. To abstain, also, from cups, blisters, moxas, and other counter-irritants, unless they are especially demanded by the presence of pleuritic pains. To be cautious in resorting to inhalations, as being remedies of doubtful efficacy, and only to be ventured upon in the earliest stages of the disease. To use iodide of iron, in small doses, as a resolutive; and to strengthen the system by the administration of tonics — especially the martial preparations. To endeavor to invigorate the patients constitution by changing his hygienic condition — by pure air, exercise, nutritious diet, and moderate stimulation. If the patient can afford it, by change of climate, or a sea voyage.

It has been supposed that the malaria which produces intermittent fever is beneficial

in this disease. This idea Dr. Watson — whom I refer to frequently, as being the latest authority in our schools on these subjects — believes to be an erroneous one: and there are ten chances to one that Dr. Watson is right. Yet the one chance that he is wrong, entitles the subject to such investigation as shall establish the truth or error of the suggestion. There was not a whit more of foundation for the tradition that cow-pox was prophylactic against small-pox, when Jenner's attention was first directed to that subject — indeed not so much; and if any future Jenner can demonstrate that the malaria of our marshy districts has any power to prevent or control the tubercular disease, he will assuredly crown himself with imperishable laurels, besides doing a most essential service to humanity and <u>the</u> profession.

We have never had the good fortune to meet with any attempt at explanation of the <u>rationale</u> of the foregoing suggestion. Were we disposed to indulge in a little satire, we

might say, granting Carswell to be correct in his theory of the deposition of tubercles on free mucous surfaces, that an intermittent fever operated beneficially by shaking them from their attachments. But really the matter deserves more serious consideration. It is an indisputable fact, that phthisis is a rare disease in the malarious districts of this country; and a close inquiry into the cause of this, might throw valuable light upon the nature of the disease we are discussing. It may be that the immunity of the inhabitants of such districts is owing simply to the use of tonic medicines, which their endemic renders necessary; but it is certainly more reasonable to suppose — granting tubercular matter to be a morbid secretion from the blood — that the influence of malaria, by altering the condition of the vital fluid, may thus correct the particular morbid phenomena which originate the deposit.

The following language of Dr. Watson furnishes us with a hint for future investi-

gation:—

"The disease, when so limited, may cease "in another way. The more watery parts of the "morbid secretion may be absorbed; and the "earthy salts it contains may concrete; and "the whole be converted into a shriveled, hard, "chalky mass, which sometimes is coughed up, "sometimes, in favorable cases, remains for "years in the lung, an inert and almost "harmless body.

"Let me state, while I think of it, that "the expectoration of these chalk-like concretions, "denoting, as it usually does, the existence of "pulmonary consumption, marks at the same "time the chronic character of the case. I am "acquainted with a gentleman who, though "delicate, enjoys a very fair share of health, "and who has for years been coughing up, at "intervals, little branching fragments, like "bits of white coral, consisting principally of "carbonate and phosphate of lime, and evi-"dently moulded in the smaller bronchial

"tubes."

Now if the blood of consumptive patients were analyzed carefully and diligently, there is just a bare possibility that it might be found to contain an excess of the earthy salts, thus incidentally alluded to; and should the investigation be pushed a little further, and the earthy salts in such excess, actually found to consist of carbonate and phosphate of lime, why, by directing the treatment steadily and perseveringly to overcome this condition of the blood, may we not discover an agent whose virtues will be as specific against tubercles, as quinine against the malaria of intermittents.

After all, may not carbonic acid be the root of this terrible evil, phthisis. We shall devote a brief space for summing up some of the circumstances which render it probable. The disease is most frequent in large cities, where carbonic acid is copiously generated by various agencies. It

is more immediately produced by living in badly ventilated or crowded apartments, where there is not sufficient pure air to carry off the carbonic acid generated by the system, and which is consequently re-inhaled. It is said to be often induced by the depressing effects of continued grief — and how? Why, one of the well-known physiological effects of this passion is, partially to suspend or interrupt the action of the lungs, and, therefore, to prevent the proper decarbonization of the blood. Long and intense application of the mind, another predisposing cause, may operate in the same way. Mechanical compression of the lung, from various causes, may predispose to the disease in the same way — namely, by preventing due decarbonization of the blood.

Again, almost the only means that are at all available in the treatment of this disease, may be explained to be so upon the principle that they operate to de-

carbonize the blood. Why is a patient advised to seek a location which will secure to him the benefit of a pure atmosphere, but for this object? Does not exercise contribute to the same purpose, by increasing the frequency of respiration? Do not change of scene and travel — which effect the double purpose of securing to the patient good air, and dispelling the depressing emotions which impede the action of the lungs — contribute to the same end? And, lastly, does not a sea voyage — a means of such signal efficacy often — besides uniting in itself all the good results of the above mentioned agents, offer the additional advantage, that the patient is removed from such sources of carbonic acid as the decomposition of vegetable matters in atmospheric air.

Furthermore, may not the efficacy which has been attributed to a residence in malarious districts, be explained by

the same mode of reasoning. The decomposition of vegetable matters in marshy places, instead of furnishing carbonic acid, forms carburetted hydrogen, which — even if it be not, as has been suggested, the principle of malaria itself — differs widely in its effects upon the system from the former agent.

To recur to the suggestion that tubercles may be the result of an excess of the earthy salts in the blood, let us examine how far it is substantiated by the age at which the disease most frequently occurs. Phthisis is rare before the age of eighteen, while the process of ossification is yet going on; and while, consequently, there is a constant demand for all the earthy salts that may be formed in the system. It is of most frequent occurrence from the age of eighteen to thirty-six. After the latter period, it declines in frequency. How may this be accounted for? Why, after this age, we

find that earthy salts begin to predominate over animal matter in the bones — that the tendency to ossification of the blood vessels commences — and that calculous diseases of the urinary organs, become more frequent. Now, would it not be worth the while, to enquire, how far the existence of the two species of disorders is compatible? The statistical sagacity of a Louis might satisfactorily settle these points.

Against all these suggestions, we have militating arguments in the hereditary character of the disease, and in the fact, that certain conditions of the lung, such as emphysema, are unfavorable to the development of tubercles. These would seem to indicate that the fault lay in the structure of the organ, and not in any morbid condition of the blood. Were our object, however, to establish a new theory, a little ingenuity might serve to explain away these obstacles. But we

have intended merely to indicate, by these crude remarks, certain points, upon which we design to bestow future study and research.

Celsus, alluding to the disciples of Asclepiades, remarks — "they are of opinion that the man who has first learned in what manner these (disorders) happen, will be capable of curing them." This is in accordance with our own sentiments, and we have no doubt, that as soon as it is ascertained what is the deleterious principle in the blood which occasions tubercles, there will, also, be discovered a means for eliminating it from the blood. God send the speedy advent of the man who shall thus muzzle this voracious disease!

An

Inaugural Dissertation

On

The circulation of the Blood

Submitted to the examination

Of the

Provost Regents and Faculty

Of Physick

Of the University of

Maryland

For the

Degree of Doctor of Medicine

By

Summerfield P. Hamilton

A A County

Maryland

15th February

1847

Dedication

Gentlemen

I should not have had the presumption to intrude upon your attention this attempt at composition were I not compelled by a rule incumbent upon every student whose aspirations and ambition consist in a hope to be admitted as a brother in your profession, together with an opportunity it affords to express my grateful sentiments for your unwearied exertions to lay open to my understanding the many sources of knowledge in your science and although buoyed up by hope the never absent friend and companion of those whom confidence has abandoned yet I almost shrink from the attempt through a conviction of inability to perform in a laudable manner the task and nothing but a desire to comply with the obligations under which I am placed and a confidence that you will make ale due allowence for the juvenile writer in his feble efforts to give you a moments of gratitude and respect could have induced me to attempt an essay.

Men gentlemen occupying the situation that you do and having the plaudits of your

our hearts at having performed your duties made no memento of this kind to compleat your satisfaction yet surely it cannot be unpleasing to your generous minds to know that the favours you have conferred are properly estimated. With all due regard your obedient pupil.

Summerfield. P. Hamilton

To the faculty of Physick
of the University of
Maryland Baltimore

Preface

To those who lived several centuries ago the knowledge of Human Anatomy was partially if not totally unknown and it was not until the stern principles of philosophy and the advance of learning raised the veil of superstitious dread that had hitherto like a halo surrounded and prevented the solemn repose of the mouldering dead from being disturbed that it became a subject worthy the attention of the learned and curious.

After this period followed numerous theories and hypotheses garnished with hyperbolic and novel language promulgated by men who were incapacitated to comprehend what their dissecting knives revealed prompted by a vain desire to become immortalised which was believed to be incontrovertible by the ever credulous public because there was no one who dared to assail single handed what the voice of the people sanctioned.

Publications of this kind continued to attract and amuse the attention of the public each one had their proselites and like a meteor they

made for a short time a gaudy appearance but finally exploded leaving apparently that which the author abortively attempted to lucidate in a darker cloud of obscurity than before and all the exertions of the Anatomists to make their knives useful to the science of Medicine seemed fruitless Exausted by long continued efforts to aid mankind by some useful discovery it appeared as if they were about to give over their project as chimerical and fanatick when the immortal Harvey made known to the astonished literati of the world in a publication in 1619 his discovery of the circulation with an accurate idea of the function or modus operandi of the heart and although there were incontestable evidences of the validity of his discovery yet many of his cotemporaries either through prejudice or preconceived notions ever adopted his doctrine of the circulation but whatever the caprices and prejudices of the Ancients may have been they and their faults are gone together and it is left for the moderns to award to merit its due which they have done by attributing to Harvey all that he merits.

The honour of the discovery is therefore his and by it his name has been immortalised for its importance to the Physiologist and Pathologist is unbounded indeed there is no one of the branches of Medicine that it has not completely revolutionised.

This revelation as might have been expected roused from that lethargy into which anatomical research had sunk and in quick succession followed explanations of nutrition waste and the functions of the different organs with the decarbonization of the blood satisfactorily proving that Anatomy in future must forever be considered as the basis of Medicine.

How vague and inaccurate must have been the ideas of early Pathologists relative to the doctrine of acute diseases in which the circulation is largely affected - diseases which agreable to the estimate of some writers forms two thirds of the morbid affections to which mankind are liable How unbounded how profuse should be the plaudits and eulogy of a grateful world to the illustrious revealer for the many baleful diseases he disarmed

of their mortality by this discovery.

Where does the man of Medicine when called to relieve suffering humanity first apply to ascertain the nature and character of the disease affecting his patient but to the circulation. His scrutiny does not stop here but he examines with great care and confidence the appearance of the circulating fluid and there is not ten cases out of a hundred that some thing is not disclosed to satisfy him as to what the malady may be and it is to this all important theme that I propose to make a few remarks worthy the attention of a writer better qualifyed to do it justice than I am

Circulation

In order to make an introduction the heart must be considered as the centre organ of circulation whose function consists in propelling the blood with the various products of absorption through the lungs and then throughout the whole system along the arteries and capillaries to be returned by the veins to undergo the same changes in the lungs as before thus accomplishing a circuit.

The lower class of animals differ much in their organs of circulation. In some the apparatus appears to be commingled with the digestive in others the blood is propelled without any great centre organ and in others again the heart is but a single organ but in man and in the upper class of animals the heart is double consisting of two sides or indeed of two hearts separated from each other by a septum

Anatomy of the Circulatory organs.

The circulatory apparatus is composed of the organs by which the blood is put in motion and along

which it passes in its circuit.

Heart

The heart as I before said is in man composed of two or a double organ and that each system of circulation is composed of a heart of arteries through which the blood is sent from the heart and of veins by which the blood is returned to it and the minute termination of each of these is the capillary system. I shall first describe the central organ as forming two distinct hearts and afterwards the two united.

The pulmonic or anterior heart also called the heart of black blood is composed of an auricle and a ventricle. The auricle so termed from some resemblance to an ear is situate at the base of the organ and receives the whole of the blood returning from the various parts of the body by three veins. The two venæ cavæ and the coronary vein. The vena cava descendens terminates in the auricle in the direction of the aperture by which the auricle communicates with the ventricle. The vena cava ascendens the termination of which is directed more backwards has the remains of a valve which is much larger in the foetus called the valve of Eustachius

The third vein is the coronary it returns the blood to the heart which has been carried thither by the coronary artery.

The opening through which the auricle projects its blood into the ventricle is situate downwards and forwards. The inner surface of the auricle is distinguished by having a number of fleshy pillars in it which from their supposed resemblance to the teeth of a comb are called musculi pectinati. The right ventricle is situate in the anterior part of the heart the base and apex corresponding to those of the heart it communicates with the auricle by the auriculo ventricular opening and the only other opening into it is that which communicates with the interior of the pulmonary artery. The opening between the auricle and ventricle is furnished with a tricuspid valve and the pulmonary artery has three others called sigmoid or semilunar. The systemic heart called also the heart of red blood has likewise an auricle and a ventricle The left auricle is considerably thicker and stronger but smaller than the right. The columns in the latter are like those of the right but less distinct. The left auricle receives the blood from the pulmonary

veins. The left or aortic ventricle is situate at the posterior and left part of the heart. Its sides are three times thicker and stronger than those of the right ventricle to permit the much greater force which it has to exert. It is narrower and rounder but considerably longer than the right ventricle and forms the apex of the heart.

The internal surface of this ventricle has the same general appearance as the other but differs from it in having its columnæ carneæ larger more numerous firmer and stronger. In the aperture of communication with the corresponding auricle there is a valve which has been termed mitrae from some supposed resemblance to a bishop's mitre behind the commencement of the pulmonary artery a round opening which is the mouth of the aorta.

Here are three semilunar valves exactly like those of the pulmonary artery but a little stronger the structure of the two hearts is the same. A serous membrane covers both which is an extension of the inner membrane of the pericardium and the cavities are lined by a thin membrane the

endicardium. The arteries are solid elastic tubes which arise by a single trunk from the ventricle of each heart and gradually divide and subdivide until they are lost in the capillary system. The arteries are composed of different coats in superposition first an external cellular then a muscular or proper coat lastly the third or inner coat smothe and polished and is a continuation of the membrane which lines the ventricles. The capillaries are nothing more than the ending of the arteries and the commencement of the venous system. The veins like the arteries have three coats but different some what in their textures.

Physiology of the Circulation

The blood contained in the circulatory apparatus is in constant motion. The venous blood brought from every part of the body is emptied into the right auricle it passes into the corresponding ventricle the latter projects it into the pulmonary artery by which it is conveyed to the lungs passing through the capillary system into the pulmonary veins these convey it to the left auricle from the left auricle it enters

the corresponding ventricle The latter projects it into the aorta along which it passes to the different organs and tissues of the body through the general intermediate capillerary which communicates with the veins These last vessels return the blood from whence it set out. This entire circuit includes both the lesser and the greater circulation. The power employed in the circulation is threefold first that of propulsion secondly by suction thirdly by capillary attraction.

It was not until the commencement of the seventeenth century that any precise ideas were entertained regarding the general circulation but at the present day it is well understood

An
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Pleuresy
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Abraham S Baldwin

Baltimore Infirmary Feb 10th 1847

To William Power M.D.

Professor of Theory and Practice in the University of Maryland

This essay is dedicated as a testimony of the high esteem in which his talents and unremitting exertions for the promulgation of the true principles of the science are held by the

Author-

In compliance with the requisition of a student presenting himself before your honorable body; for an examination for the Degree of Doctor of Medicine, I submit to your inspection the following dissertation on the subject of Pleurisy. The limits of a thesis will not permit a full examination of all its various complications, a few however of the most important will meet with a passing notice; "Pleurisy is an inflammation of the serous membrane that lines the cavities of the chest and invests the organs therein contained." And the order I propose treating of it is in the first place, to devote a few pages to the pathological changes, then its causes; general symptoms; and Physical signs, Prognosis; and treatment; The pleura like all other serous membranes when inflammed its functions are deranged, redness

and congestion are the first alterations, which it undergoes and is seated principaly in the subserous membrane which is seldom softened, and still rarer ulcerated; during this early stage of congestion the secretions are demininished or totaly suspended, and the membranes no longer glide over each other with their accustomed ease. this condition of things however does not last long, in a few hours the secretions return with increased quantity being poured out into the cavity of the pleura, varying from a few ounces to several pints; when the effusion is great the lung is compressed a part of the breathing apparatus rendered inactive; and in this way giving rise to great dyspnœa; and in these cases the lung is not only compressed, but the diaphragm is also pressed down displacing in a degree the liver stomach

and spleen; and if the effusion be seated on the left side the heart is also more or less displaced and pushed over toward the right side;

The liquid exhaled from the inflamed membrane presents a great many variaties; sometimes clear resembling pure serum again renderd turbid by the flocculi of albumen which float about in it, sometimes yellow or discoloured by the exhalation of a small quantity of blood, and again it presents all the characters of pure pus. whatever may be the appearance of the effusion whether transparent serum blood pus or what not, they are always perfectly inodorous unless there is an external opening with the atmosphere or a communication through the lung; of this fluid a portion is absorbed, and that which is termed coagulable lymph becomes

organized; many and interesting are the experiments that have been performed on the lower order of animals to prove the rapidity with which it undergoes organization and form false membranes binding the lung down and very materially interfering with the functions of the organ; the lung occupying from necessity a smaller space than natural, and being unable to expand and fill up the cavity; the walls of the chest from atmospheric pressure, becomes flattened and retracted producing a permanent deformity; therefore one of our main objects in the treatment should be to control as much as is in our power, the formation of these unnatural bands, not only in order to prevent deformity occasioned by them, but they are also very apt to become at some future period the favourite seat of tubercular deposite

So much for the anatomical characters presented, and we pass in the next place to consider the causes which give rise to them, which are nearly those that produce inflammation in all other serous membranes; cold as being a common producing cause is incontestably proven from the season in which this disease mostly appears; and the circumstances which modify its effects are various, the most favourable condition for its deleterious effects upon the system, is in combination with moisture or when the person is in profuse perspiration, and the capillaries are in a high state of excitement; and in this way suppressing the perspiration and interrupting the proper physiological action of the cutaneous exhalents; mechanical injuries also operate to produce the same effect, such as punctured wounds whether inflicted by pointed instruments, or the end

of a fractured rib; inflammation of the parenchyma of the lung, by coming in contact with the membrane is almost always accompanied with more or less Pleurisy, and to this state of things authors have given the appellation of Pleuropneumonia which term should never be used. Says Dr Power unless the Pleurisy is sufficient to produce effusion and give rise to a distinct and seperate disease;

Tubercular deposite is evident to every one that is accustomed to witnessing the progress and termination of this disease, as being a fruitfull source of Pleurisy; sometimes only producing a slight inflammation with the effusion of a small quantity of coagulable lymph which gives rise to adhesion of the pulmonary with the costal pleura, which is so universally found in phthisical patient after death, again a vomica bursts into the cavity of the pleura, or

the tubercles are seated immediately under the membrane and in this way give rise to intense inflammation accompanied with effusion, and all the symptoms of pleurisy;

The symptoms by which it may be recognized when present, will next occupy our attention, the pain one of the most characteristic signs, presents numerous varieties with respect to its seat intensity and duration, it is mostly felt a little below the nipple, although the extent of the inflammation may be considerable, it is sometimes felt in the axilla, and occasionally in different parts of the chest, it is also wandering for sometime, but when it becomes fixed and stationary whatever may be its seat it is a sharp lancinating pain, or more expressively called a "stitch". and

is generally increased by per-cussion inspiration, cough, lying on the effected side, and in fine any thing that gives motion to the inflammed parts; it is mostly accompanied or preceded by a chill or rigor, and judging from the severity of which, we can form a pretty correct idea of the intensity and duration of the subsequent disease, it is followed in a short time by more or less reaction, and febrile symptoms, although sometimes considerable seldom rising so high as in pneumonia; in consequence of the severity of the pain even before there is any effusion the breathing is impeded, the inspirations are short and hurried, and the patient will not dilate his chest to its usual size in consequence of the great pain it occasions, when the effusion has

taken place we can readily conceive the difficulty of breathing will be in proportion to the amount of liquid in the chest, many cases however are given by authors in which the breathing remained easy and natural during nearly the whole course of the disease cases in which the effusion came on by degrees unaccompanied by pain and the healthy lung has time to accommodate itself to its increased duty, Cough as a symptom is not always present, though when it does exist is dry and as it were half-suppressed, if accompanied with expectoration it is purely catarhal unless accompanied with bronchitis and then we have the sputa designating its presence, if complicated with pneumonia, then we have the rusty sputa so characteristic of that disease; various and conflicting are the

opinions with regard to the position the patient assumes in the different stages, none of which I shall present here, except that mentioned by Dr. Watson, and supported by facts and reason, and now generally conceded to be the correct view, that the patient in the first stage while the pain is severe mostly lies on the healthy side or back and when the pain has diminished in severity and effusion taken place, the patient instinctively reclines towards the effected side to give free expansion to the healthy lung and that side of the chest, and at the same time to prevent the pressure of the fluid downward on the mediastinum and in this way impede the functions of the healthy lung; the pulse is full hard and bounding difficult to compress and subdue

differing in this respect from the soft pulse in pneumonia and the small thready pulse of abdominal inflammation; the urine is scanty and high coloured; the tongue presenting nothing peculiar in this disease, but is that of simple inflammation; generally covered with a white frosty looking fur, the stomach and bowels rarely suffer much unless the febrile symptoms are very great

Such is the array of general symptoms presented in a case of simple acute Pleurisy. no one of which can be strictly called characteristic, the pain which is most generally present differs very little from that of pneumonia, and frequently assimilates very closely Pleurodynia; and so with the cough chill &c, all of which are incident to other diseases; but when taken

in connection and observing the order of their succession and the mode of their attack, we may be able in many cases to form a correct diagnosis and again in many cases it would not only be very unsatisfactory, but altogether impossible; fortunately however we have another and very important set of signs, termed Physical which when taken in connection with the preceding render the diagnosis easy, and certain; the first of which is the friction sound produced by the rubbing together of the inflammed membrane, roughened by congestion and the deposition of coagulable lymph. thrown out on their previously smoothe surfaces; like all other morbid sounds heard within the chest it is capable of much variety in tone and degree; but its most common character is that

of alternate rubbing; as soon as a slight effusion has taken place it is announced by dulness on percussion, which is at first seated at the base of the lung, and goes on increasing untill frequently the sonorousness of the whole of that side of the chest is diminished, this dulness is changeable when the effusion is not sufficient to fill the whole cavity, changing with the posture of the patient always gravitating to the most depending point, differing in this respect from the dulness in pneumonia which always remains the same, let the patient assume whatever posture he may; From the commencement of the disease even when there is no effusion, while the pain is very acute, if we apply our ear to the chest the vesicular murmur is decidedly weaker on the painful side than natural

from the dread the patients has of expanding the chest, and in this way preventing free admission of air into the lung; when effusion has taken place; the respiratory murmur becomes weaker in proportion to the amount of liquid present, untill at last it is almost entirely wanting; and in its stead we have bronchial respiration, a sound resembling the rushing of air through a number of small tubes or quills, when the lung is compressed by a great quantity of liquid if we apply our hands on the chest and get the patient to speak there is almost a total absence of vocal thrill, caused by the intervention of the fluid between the lung and the walls of the chest, just the reverse of the increased vocal fremitus, when the parenchyma of the lung is rendered solid by inflammation,

Another and very important sign though not always present, when heard may be strictly called pathognomonic is that sound which writers have generally concluded to call agophony, or goat voice, this appellation was first given to it by Laennec, from its supposed resemblance to the bleating of a goat. it is capable of undergoing various modifications, sometimes truly resembling the trembling voice of a goat. again we hear a sound as if a person was speaking through a trumpet, and sometimes as if the voice was partially suppressed, or spoken through the nose, it varies considerable according to the amount of liquid present, and as long as the effusion is inconsiderable the voice presents no modifications, and when the liquid present is sufficient to entirely compress the lung and prevent the admission of air into the bronchial

tubes we do not have this peculiar voice, but it is presented in the most marked degree when the fluid is barely sufficient to compress a portion of the lung, agophony is produced by the passage of the vibrations of the bronchial tubes from the compressed lung through the fluid to the walls of the chest, and can be heard best generally about the angle of the scapula.

Before leaving the auscultatory signs I will mention another which is heard only when there is air in the cavity of the pleura at the sametime with fluid, and this is succussion which is produced by shaking the patient by the shoulders and at the sametime applying the ear to the chest, we hear a splashing of the liquid against the walls of the cavity.

The changes that take place in the healthy side are increased

resonance on percussion and puerile respiration, consequent upon the inhalation of a greater quantity of air to supply the deficiency occasioned by the affected lung;

The most frequent termination of Pleurisy is that of recovery, and this says Dr Power if it be anyways like properly treated, should almost always be the result of simple uncomplicated acute Pleurisy, either by resolution and perfect cure or by adhesion of the costal with the pulmonary pleura, which is the next most favourable issue, when it exists however on both sides the Prognosis becomes more grave, and upon a close examination we will mostly detect the presence of tubercular deposits, though we never previously suspected their existence, sometimes in consequence of the bad state of the constitution or some other cause, it runs down into a chronic form

In treating a case of Pleurisy there are three great indications to be fulfilled, the first of which is to deminish the force of the heart and arteries, and this is done most effectually by bloodletting which should be used early and freely, no remarks however could I make with regard to the rules and mode of using this important remedy that would be half so concise and plain as the observations of Dr Power, bleed says he; not by any formula or graduated measure, but to effect; untill the pain is deminished and the breathing becomes more natural and easy; and the pulse softer and more compressible, and in this way we frequently cut short the disease, but if the symptoms indicating it in the first place should return we again resort to general or local depletion by means of leaches or cups

applied over the painfull side, and it is this latter mode of abstracting blood, that is known to be so efficient in membraneous inflammations.

The second is to increase the absorption of the effused fluid, and this may be accomplished most admirably by the administration of small and frequent doses of some of the preperations of mercury. such as proto chloride or blue pill in combination with antimony squills or Nitrate of Potash. and if it should operate to freely upon the bowels a few grains of Dovers powder should be added to check them; and in this way to insure its speedy effect on the system; the mercury not only serves to increase absorption and prevent the formation of false membranes but it also acts as a contra stimulant.

Revulsives in the treatment of Pleurisy can never be resorted to in the early

stage while the febrile symptoms are present without increasing them and giving great annoyance to the patient; but when the fever has entirely subsided, and the pain greatly diminished, and there still remain the signs of considerable effusion, we make use of ~~the~~ friction over that side of the chest with Hydrodated mercurial ointment or what is more commonly used a large blister, and in this stage they become an excellant adjuvant to the other means.

But sometimes in spite of all our best directed efforts the effusion goes on increasing, and the patients life becomes in eminent danger from suffocation we then call to our aid surgery as the last resort: to perform the opperation of Paracentesis thoracis. to draw of the fluid and afford temporary relief to the patient: and it is mostly

but temporary, for it will soon be replaced by more, unless in those cases where it consists of blood as the result of some mechanical injury.

The last indication is to relieve pain and procure rest; which is effected by administering anodynes, and if the pain be extremely severe, by bandaging the chest so as to render the breathing almost entirely abdominal, and prevent the motion of the inflamed parts.

An

Inaugural dissertation

on

Acute Pneumonia

Submitted to the examination

of the

Provost, Trustees and Medical Faculty

of the

University of Maryland

For the Degree

of

Doctor of Medicine

By

John Randolph White

of

Maryland

A.D. 1847

To

William Power M.D.

Professor of Theory and Practice of Medicine in the University of Maryland.

In admiration of his skill and correct judgement of the physical signs and diagnoses of diseases this humble essay is respectfully dedicated by his friend and obedient Servant,

The Author

To the professors of medicine in the University of Maryland, I with due respect submit the following dissertation upon the disease technically termed pneumonia - or in other words - inflammation of the substance of the lungs. As it is an affection, of which we are only able to gain a true and correct knowledge by practical observation in the chambers of those who are affected by it; you therefore, gentlemen, (knowing as I presume you do my slender stock, of practical observation; in this disease as well as many others) can scarcely indulge in any expectations astonishing advancing any thing new relative to the disorder which I am now about to describe according to the best of my circumscribed ability. — —

I have defined pneumonia to be inflammation of the substance of the lungs. - Questions have been asked as to the exact part and texture, in which the inflammatory process is carried on. Dr Watson contends that all the textures composing the pulmonary substance in the part inflamed, are involved in the inflammatory process. We ascertain the extent, situation and progress of pneumonia by the method of auscultation; the changes which are wrought in the pulmonary substance

by the inflammatory process are also made known to us by the same method. Therefore we should learn what those changes are, and know the morbid anatomy of pneumonia in order to have a correct idea of its pathology. We learn from authors that there are three well marked and constant conditions of the lung, corresponding to different degrees and periods of its inflammation.

The first stage is termed engorgement; by which I mean the substance of the lung is gorged with blood, or bloody serum. To prove this to be the state of the lung, we find by post mortem examinations, the lung to be of a dark-red colour externally; that it crepitates less under pressure than the sound lung; that it contains more liquid than air in its cells; that it is heavier and not so elastic as the sound lung; and that the impression of the finger is seen after pressure has been made. When an incision is made through the engorged portion, we find it red, and see a quantity of reddish and frothy serum flow from it; there is at the same time an impairment of its cohesiveness; it is more easily lacerated; in which respect there is a similarity existing between it and the spleen; hence the term splenization of the lung has

been given to this stage of its inflammation. Although the specific gravity of the engorged portion is increased, it will nevertheless float upon water.

There is a frequent source of fallacy in respect to this condition of inflammatory engorgement, says Dr. Watson, which is the mechanical engorgement of the back part of the lung; or that part, which has been most dependent during the last hours of life, or after death; which false condition is rather difficult to be distinguished from the true one, by their anatomical characters alone. If the engorgement be not in the depending part of the lung, we may truly say that it is inflammatory. We judge too by the antecedent symptoms.

In the second stage the lung is further altered, and presents the following characters. It wears still a reddish coat both within and without; crepitation is no longer heard, and it sinks in water; there is not a particle of air in it. When cut, the surface resembles the cut surface of the liver; hence also the name hepatization given to this changed condition of the lung by the celebrated Laennec. When an incision is made and pressure be applied, some red fluid is seen to flow, but in a less quantity than in the former

stage, and there is no sound. As the degree of inflammation advances, the texture of the lung becomes so rotten that a gentle pressure between the thumb and fingers will suffice to reduce it to a pulp; this stage receives from the learned pathologist Andral, the name of ramollissement rouge - red softening.

The third stage is characterized by the following signs. As in the second stage the pulmonary tissue is dense, solid and impervious to air; the colour is changed; it presents a reddish-yellow, or drab colour; mottled with red or black pulmonary matter. The lung is full of puriform matter, which oozes out when incisions are made, which matter is unattended by fetor. Laennec also has given the appellation, gray hepatization, to this stage of the inflammation of the lung. Andral applies the term ramollissement gris - gray softening. Dr. Watson says it consists in diffused suppuration of the substance of the lungs. —

Modern research and observation has brought to light a very remarkable circumstance, viz; that inflammation in the lung; going on to suppuration, does not lead to the formation of an abscess; as it does when it attacks the areolar tissue, or the parenchymatous tissue in other parts of the body.

In fact abscess of the lung is of very rare occurrence. To wit- In the dissections made by the immortal Laennec of many persons who died of pneumonia during the period of many years, he only met with five or six collections of pus in the inflamed lung.
Andral saw but one real abscess of the lung as a consequence of pneumonia. Gangrene is sometimes, but very seldom, the result of acute inflammation of the pulmonary texture. It is said to be more common (though in any way rare) as and in dependent and primitive affection. The colour of the part which thus perishes, is of a dark or greenish brown. Its odour is insupportable; which abominable fetor during life truly tells the serious affection of the lung.
We may have in this disease, inflammation of both lungs at once; or it may attack one only. To speak more technically, pneumonia may be either double or single. Inflammation of the lungs may be either partial or general. It is greatly more common in the right than in the left ~~lung~~ lung.- To wit- Of one hundred and fifty one cases of pneumonia noticed by M. Andral, ninety were of the right lung; thirty eight of the left.

seventeen of both at the same time; and in six the situation was not known. Pneumonia, we may say, is more than twice as common in the right lung than in the left; to prove which many statistical statements collected by men of observation and experience could be produced. It is stated, and very correctly too; that in active idiopathic inflammations of the pulmonary texture; inflammation occurs much oftener in the lower lobes of the lungs than in the upper: to confirm which assertion, I may again adduce Andral's statistical statement. Of eighty eight cases of pneumonia; he discovered that inflammation affected the lower lobe forty seven times, the upper thirty, and the whole lung at once eleven. We may have bronchitis without pneumonia; but pneumonia without a corresponding extent of bronchitis, is perhaps never seen. Pneumonia may, and does occur without any pleurisy, though in a majority of cases, there is a degree of inflammation of the investing membrane.

Having now described the most important changes wrought by the inflammatory process going on in the pulmonary texture of the lungs; I may next describe

what are the signals of its existence, and how we can ascertain the important morbid processes transacting in the cavity of the thorax.

In the first stage of inflammation of the lungs; that of engorgement, if the ear be applied to the surface of the chest, we hear a peculiar crackling sound, the finest kind of crepitation, which sound is said to resemble the crackling explosions of salt thrown upon red hot coals. Mr. Andral says it resembles the sound made by rumpling a piece of parchment. A very correct idea of this sound may be obtained by rubbing between the finger and thumb a lock of ones own hair close to the ear. Laennec called this peculiar sound crepitant rhonchus. Dr Watson terms it minute crepitation; or the crackling of pneumonia. This is a very important sound, a direct symptom, which may be referred to the structure of the diseased part. "If we consider (says Dr. Latham) what the part is, and what the disease; the part the lungs, and the disease inflammation: we cannot too highly value this single symptom, which gives the earliest and surest intimation that such a disease has begun, attends to the disorganization and the inevitable loss

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of life, & is quickly arrested by its counteracting remedy.
Minute crepitation is at first heard mingled with the ordinary vesicular breathing, which last is in a measure obscured by the morbid sound; and as the inflammation advances the crackling becomes more and more audible, until at length it entirely supersedes the healthy sound. If the vesicular breathing prevails over the crackling we may be sure that the inflammation is but slight, but if the crackling sound become predominant, and if it entirely mask the healthy murmur of respiration, it then denotes the progress of pneumonia, and that it tends to pass from the first to the second stage.
The seat of this minute crepitation is said to be in the smallest ramifications of the bronchi, and the air vesicles; that it results from the passage of air through liquid: from the formation and bursting of a multitude of little air bubbles. If the disease advances, and we again apply the ear to the chest a new sound is heard; a whiffing, blowing sound, like that produced by blowing through a quill. This sound is called bronchial respiration; it is produced by the hepatized lung admitting air to pass through the larger bronchi, but admitting none in the vesicles

and smaller tubes. The voice too becomes much more resonant than natural; hence the term bronchial voice, or bronchophony; thus we become acquainted with sounds that are never heard when the lungs are healthy, which sounds are also very significant in other pulmonary affections as well as in pneumonia. Together with these sounds we may hear in the unaffected lung, or in that part of the diseased lung which is healthy, puerile respiration. Whenever we hear this sound we may be sure that a part of the respiratory apparatus is very much out of order, and that the healthy portion is toiling to compensate for its deficiency. It is asserted, that we may meet with three stages of pneumonia after death in different parts of the same lung, which degrees of inflammation of the lung during life are pointed out to us by the method of auscultation; at least the first two stages are. Auscultation, (it is said) cannot trace with any certainty this disease farther than the stage of hepatization. These are, then, some of the most important physical signs that attend, and make known the successive changes wrought in the pulmonary texture, by the inflammatory process.—

I will now proceed to describe some of the most important general signs appertaining to pneumonia.—

In the majority of cases of this disease, the begining of the inflammatory action of the lung is marked by chill-ing, followed by heat and increased frequency of pulse; in a word by inflammatory fever, a stitch in the side is felt; cough, and a sense of weight in the chest. In some cases of this disease, these symptoms are not so well marked. At first the cough may be dry, but it is soon accompanied with a very characteristic kind of sputa; the dyspnoa may be slight in the commencement, or it may be quite difficult. Pain in pneumonia exists only when the pleura is involved in the inflamma-tion, it is excited by cough, by a full inspiration, by pressure, or by percussion made upon, or over the diseased part. The patient lies uneasily on the affected side. The breathing is more difficult when the patient lies on the healthy side, than when on the diseased side; in truth those ~~who~~ affected with pneumonia most always lie upon their backs. The dyspnoa varies in its degree in different cases; it may be so slight that the patient is scarcely aware of its existence;

then again it may be so severe that the patient seems to be altogether occupied with his breathing; unable to lie down; speaks with difficulty; face lividly red or pale; nostrils expanded and quite active; respiratory actions are frequent and very short. Few patients recover from this ~~[illegible]~~ degree of dyspnœa. — Delirium when it occurs in pneumonia is a very grave and dangerous symptom; indicating that the arterialization of the blood is much impeded by the pulmonary disease. In pneumonia, the cough is not peculiar, and gives but little information; it is dry in the outset; but after a while, it is attended with the expectoration of a peculiar sputa; which indicates strongly the presence of pneumonia. —

The characteristic expectoration of pneumonia when well marked, "consists (says Dr Watson) of transparent, tawny and ~~red~~ rust coloured sputa, uniting, in the vessel containing them, into one jelly-like mass; and of such viscidity that the vessel ~~may be~~ turned upside down and strongly shaken without their being detached from the bottom or sides.,, Although the rusty coloured sputa are peculiar to pneumonia, we must bear in mind that they do not constantly accompany it. —

Whenever gangrene attacks the pulmonary texture - which is indeed very rare - the sputa becomes of a greenish or dirty gray colour, exhaling a fetid and very offensive odour. I have now given the symptoms seperately, appertaining to pneumonia; but as they exist together it will be just fair, that I should describe them so. Pain in the side is the first symptom most commonly felt; preceded or not by rigors; the breathing at the same time is oppressed, and the patient coughs without spitting. Now at this period if the ear be applied to the chest, it may detect a slight degree of minute crepitation; the thorax if percussed sounds well, and there is some fever. This constitutes the primary stage of pneumonia. Now symptoms are developed about the third day after the attack; the expectoration now becomes characteristic of the affection, the minute crepitation increases until it finally supersedes the healthy murmur, the patient breathes short and frequent if the dyspnoea increases; he cannot lie on the affected side if the pain be acute; neither can he lie on the healthy side; because that makes his breathing much more difficult; the decubitus is therefore dorsal. Although the disease in this primary stage may be severe, it not unfrequently recedes, and terminates by resolution; though sometimes instead of terminating thus, the inflamanation becomes more intense and extensive, with-

-outpaging into the second stage) and it may prove fatal.
When the respiration becomes more and more oppressed, short and frequent; speech much interrupted; sputa very viscid; the sound elicited by percussion decidedly dull; we may without error pronounce it to be the second stage of pneumonia. Yet even in this degree the disease may recede and also terminate by resolution. As there are no certain means of ascertaining the third stage of pneumonia, we may merely conjecture that it is established if the face becomes very pale, the expectoration of a prune-juice appearance, and if the disease has existed for some time. The average duration of pneumonia is said to be about ten days.
As to the causes of pneumonia, I may briefly say that cold is its most common and exciting cause; sometimes no cause can be traced to which we can ascribe the production of the inflammation of the pulmonary tissue.
The prognosis of pneumonia varies in character as its stages vary; being not so grave in the first stage as in the second, and exceedingly grave and very uncertain in the purulent form, or third stage. Resolution may still take place, although a large portion of one lung should be hepatized, but to prove that the lung may recover from the third degree of inflammation

is beyond all possibility. Much will depend upon the extent and degree of inflammation existing in the lung. When the upper lobes are attached, the prognosis is decidedly graver than when the lower lobes are to the same extent and degree. Whenever there is much dyspnœa accompanying the disease we have just cause to fear the termination will be a fatal one; the pulse gives but little information; if however a feeble pulse attends oppressed breathing, and it does not improve after the first bleeding, we may infer that the inflammation is intense, and consequently the prognosis a grave one. Whenever delirium supervenes the case is decidedly hopeless. The pulmonary inflammation is intense when the sputa becomes very viscid and of a deep rusty colour; their retrograding to the catarrhal condition announces that resolution is taking place. Plum-juice sputa indicate suppuration of the lung, and therefore the prognosis is truly unfavourable. I will now proceed to speak of the treatment of pneumonia. The remedies that most require consideration are blood-letting, tartarized antimony and mercury. Bleeding may justly be termed our sheet anchor in acute pneumonia. When venesection is performed early upon a patient labouring under this disease, it manifests a very decided and happy effect over the inflam-

mation. In the first place it tends to check, or extinguish the inflammatory process; next it tends to relieve the particular function of the lungs. The marked result of free venesection when performed early, in acute pneumonia, fully proves the efficacy of a practice, which has been pursued for many ages. In order to produce a decided and beneficial effect over the inflammation, we should abstract blood freely and early, during the state of engorgement. The patient should be bled in an upright position; the blood should flow from a large orifice and in a full stream: the blood should not cease to flow until a decided impression is made upon the system; until the pulse becomes softer, or if contracted until it becomes fuller; until the sensation of the constricted chest has abated, and the dyspnœa mitigated; or until syncope seems to be about to take place. We must not trust to one bleeding; thinking it will suffice; but we should always endeavour to see our patients a few hours after the first bleeding, so that we may repeat the operation, if the relief has not been permanent. If we judge it necessary we should bleed two or three times in the course of twenty four hours. — As adjuvants to the lancet we may use cups and leeches; applied to surface of the chest in large numbers. They will be decidedly useful

if there be pain; and they should be applied directly over the seat of the inflammation, which may be ascertained by the method of auscultation. At the same time the patient must be put upon the antiphlogistic regimen, he must keep his bed, and all unnecessary exertion of his lungs in speaking must be objected to.

"When the second stage, that of hepatization supervenes, we cannot expect that the abstraction of blood will prove so effectual upon the inflamed and solid parts of the lung; but even then, says Dr. Watson "if duly moderated, it will diminish the force of the heart and arteries, and so tend to prevent the extension of the inflammatory process; it will lessen the whole quantity of blood circulating through those portions of the lungs which are still pervious, and thus relieve dyspnœa; and it will put the system into the condition most favourable for the reabsorption of the lymph by which the air-tubes and vesicles have been stopped up.,, But there is a period in the pulmonary inflammation when bloodletting is not only useless, but absolutely injurious; which if employed at this stage of the disease actually debilitates the patient, and thereby renders him unable to rid his lungs of the tenacious mucus exhaled

by the bronchial membranes; this is what takes place in those cases in which the expectoration is said to be stopped by a bleeding."

When the use of the lancet is positively forbidden; or as auxiliaries to it, we have in tartarized antimony and mercury two potent remedies. The former agent is best adapted to the first stage — that of engorgement — the latter agent to the second stage — that of hepatization. We administer tartarized antimony in this affection not with the intention of producing emesis, though in a majority of cases it is apt to cause it, but after a while the stomach seems to be narcotized by it, and we then have its beneficial influence displayed over the disease: if vomiting and purging be kept up too long by the administration of tartar emetic we check them by adding a few drops of the tincture of opium to each dose given afterwards. The following plan of administering tartarized antimony, is the one strongly advocated by Dr Thomas Davies, and sanctioned by Dr Thomas Watson.

Dr. Davies recomends (after the patient has been bled freely) one third of a grain of tartar emetic to be given in

half a wine glassful of water, with a few drops of laudanum. Two doses of this strength to be given at intervals of one hour from each other; then if the patient does not vomit it to omit the opium, but to continue it if he does; to double however the quantity of tartar emetic; give two thirds of a grain for two successive hours, and in this way to go on adding a third of a grain every two hours, until we reach two grains every hour.

Having never seen this plan of treatment tested, I may briefly quote the remarks of Dr Watson confirming its efficacy. He says "that under this plan of treatment the symptoms will often undergo a marked change for the better in three or four hours."

He said that tartar emetic, when it acts only upon the inflammation produces a more decided effect, than when it causes vomiting or purging, or a general depression of the powers of the whole system. Many persons have supposed that it conquers the disease only when it gives rise to these symptoms previously. If the dyspnœa subsides by the use of antimony thus exibited, we may discontinue it; and if the inflammation seems at all disposed to kindle, we must resort to the repe-

tition of the tartar emetic to extinguish it.
When the second stage of pneumonia - that of hepatization - presents itself we immediately resort to the employment of mercury; and we give it with the object of producing its immediate and specific effect, by administering small doses at short intervals; a grain every hour, or two grains every two hours, combined with opium to prevent it from operating on the bowels. If the bowels be too freely moved by the administration of calomel, we may use in its stead blue pill, or the hydrargyrum cum creta, and if they be contra-indicated, we may substitute the linimentum hydrargyri, or the strong mercurial ointment externally.
Now when we have done all that we can do by the timely and judicious employment of the above remedies, and no change for the better takes place, but on the other hand, the features become sunken, face pallid, extremities cold, the pulse feeble and irregular; all going to prove the speedy dissolution of the patient by asthenia; we unhesitatingly have recourse to cordial and stimulant medicines; the carbonate of ammonia in a decoction

of senecka & wine are highly spoken of; and we put the patient upon a diet of milk, beef-tea, and other nutritive, but unstimulating articles.—
Counter-irritation by means of a very large blister applied over the chest, when there is not much fever, skin not burning; but the expectoration difficult, dyspnœa considerable, much pain, a sensation of tightness and oppression in the Chest, is often productive of much relief and benefit to the suffering patient.—
Purgatives are not so efficient in this disease as in many other inflammatory affections. Yet it will be very proper to administer an active aperient at the out set; and then direct the bowels to moved once every day. Much and constant purgation would counteract the mercurial plan of treatment, from which we hope to derive much benefit when the inflammation has reached the stage of hepatization
The covalescence from acute idiopathic pneumonia when decided is rather quick; but we ~~are~~ must be on the watch against false and seeming recoveries.

So long as we can detect the slightest trace of minute crepitation in the diseased lung, we cannot pronounce a perfect recovery; and this crackling of pneumonia may continue long, and finally the original disease may be superseded by that less rapid, though more serious disorder – tubercular consumption –

Dr Watson speaks of acute idiopathic pneumonia as occuring much rarer than most persons suppose. He says he was not in the habit of seeing more than five or six cases in a year in his hospital practice. Physicians of this country disagree in that respect from him; and if I am not mistaken we were told during the present session (1847) by our worthy professor of theory and practice (than whom few, if any are better capable of forming a true and more correct diagnosis of the diseases of the Chest) – that if the diseases of the respiratory organs were better known our bills of mortality would number many more deaths of acute pneumonia –

Pneumonia, (it is very true) is very apt to supervene

upon bronchitis; upon diseases of the heart, upon fevers, especially the exanthematous fevers.- The treatment consequently of pneumonia arising from such causes is less vigorous, but more wary, than that of acute pneumonia. Much benefit is derived from the abstraction of blood by means of cupping glasses and leeches applied to the chest, which has a tendency to reduce the local mischief going on within the chest. We also make use of blisters with much advantage, and at the same time we give mercury cautiously- while on the other hand we support the patient's strenght with ammonia, wine and nutritive broths.—

Now that I have completed the task imposed upon candidates for graduation; suffer me gentlemen by the way of concluding to tender to you my grateful thanks for the many valuable and instructive lectures that I have heard from you; and also for the invaluable knowledge I have gleaned from them. And now gentlemen that you may long be spared as ornaments to the College in which you

now officiate, as exemplary characters in your high and honourable profession; and that the old University may ever continue to flourish as a College of medicine, with the same reputation that it now holds under your immediate jurisdiction, is the sincere and ardent prayer of

Your obt. Svt.

The Author

On

Inaugural Dissertation

on

Acute Laryngitis

Submitted to the examination

of the

Trustees, Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Geo. Mitchell Stokes, Maryland

An

Inaugural Dissertation

on

Acute Gastritis

Submitted to the examination

of the

Provost Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

By

Balto. Jno. D. Middleton Feb. 1st 1847.

the University of Maryland individually and collectively, for their exertions to impart the many lessons which their wisdom and experience have enabled them to cherish up and to offer, as teachers to those who come under their professional pupilage;— and when, in after life, my sphere of action will be to "heal the sick;"— while I experience the advantages to my patients, of the important information which I have recieved within the time honoured walls of the University of Maryland. I propose to offer my remarks upon the Subject of acute gastritis.—

Gastritis, or inflammation of the stomach may be divided into idiopathic and sympatomatic, thoug various other divisions have been made by the older authors. By Cullen it has been divided into phlegmonic and erythematic.— by Good, into erythematic and adhesive, to either of which I prefer the previous division, on account of its simplicity; and as there is no difference in the principles that govern our treatment I can see no good cause for such distinctions.

I must remark

"that as an idiopathic disease acute gastritis is extremely rare" Stokes. "Scarcely ever do we find either the organ as a whole, or any one of its tissues separately, the subject of spontaneous acute inflammation. Watson." This is a very curious circumstance. "When we compare the stomach with other viscera, we shall find that one of the most remarkable differences between it and other organs is, that it is much less liable to be attacked by violent inflammation as an idiopathic affection. This is an interesting fact, so rare, indeed is the violent form of gastritis, that our knowledge of the symptoms which indicate intense gastric inflammation is principally drawn from the study of cases of acute gastritis caused by swallowing corrosive poisons. Stokes." Inflammation of the mucous membranes may be, and often is, very limited in its extent:- when it affects the peritoneum, it usually spreads with rapidity over the whole surface of the membrane. Symptoms:- pain, usually of a burning or lancinating character in the epigastrium, augmented by pressure, increased also by the full descent of the diaphragm, and the breathing is consequently short and constrained. In some instances a prickling pain and soreness in the pharynx

without much gastric irritability, are the first symptoms of the disease. Intolerable thirst, with an urgent desire for cold and acidulated drinks, constant nausea retching and vomiting, especially upon the entrance of any thing into the stomach, often with hiccup, and with tension of the upper part of the abdomen. In violent cases, the irritation of the stomach is excessive, and every thing is rejected. Cold water and effervescing draughts are ejected the moment they are swallowed; but unless the disease be very violent, cold water in small quantities will generally be borne well, and even for a time afford relief to the more urgent symptoms. If the desire for cold drinks is urgent, the aversion to warm ones is equally strong; warm drinks rarely fail to aggravate the pain and vomiting, as soon as they reach the stomach. After each spell of vomiting, the patient usually experiences a temporary abatement of the gastric distress and a similar transient alleviation follows a drink of cold water, or a piece of ice in the mouth. In some cases, there is considerable difficulty of swallowing, on account of the contracted and irritable state of the upper orifice of the stomach

Not unfrequently, the brain sympathizes with the inflamed Stomach, Broussais has observed patients in this disease "as completely delirious as in fevers of the most malignant character or phrenitis." In such instances, the delirium is almost always greatly subdued, for a short time, by a draught of cold water. Acute gastritis is generally attended with great depression of spirits, and prostration of strength; the pulse, though at first moderately full, soon becomes very contracted, quick and tense, and at last so small as scarcely to be felt. In some cases a short and painful cough attends, and the voice usually becomes much altered and sometimes entirely extinct, from paralysis of the laryngeal muscles. The aspect of the countenance is expressive of great anxiety and suffering, or of despondency and despair. Of the many disagreeable symptoms, enumerated above as attending acute inflammation of the Stomach, there are none, excepting, perhaps, the nausea, retching and vomiting, that so alarms, and distresses the

patient as the dysphagia and hiccup. The former symptom is most commonly accompanied by tightness and oppression about the precordial region; the patient feeling a load or weight as he expresses it in this situation. This symptom, however, is by no means constant in this disease. The latter, hiccup, is a most harrassing symptom; it does not allow the patient a moments rest. In his brief and uneasy slumbers, he is conscious of it, and is constantly awakened by it.
The cardiac orifice of the stomach will generally be found to be the seat of the inflammation, when the symptoms appear early in the disease. When the inflammation is confined to the stomach, the bowels are constipated; but when the colon becomes involved in the disease, diarrhoea, or tenesmus with dysenteric discharges attend; the urine as in the generality of inflamatory dis=cases, is scanty and high coloured;— The tongue is generaly described as being red at the tip and round the edges, Sometimes the redness extends like a fiery streak down the middle of the tongue,

in the most cases, when there is no fur upon the tongue, it is over the whole surface vividly red. The redness extends to the fauces, sometimes in a considerable degree. This redness of the tongue indicates inflammation of the Stomach and Small intestines alone, Dr. Armstrong". Dr. Stokes justly remarks speaking on this subject, "nothing "is more common, than from the condition of the "tongue to form an opinion as to the State of the "alimentary canal, whether it is in a State of "inflammation. I believe, says he, we should be "wrong in taking the tongue alone as our guide in the treatment of intestinal derangement, whether existing in the Stomach or any other portion of the tube; and this I state as the conclusion I have drawn from my own experience, in gastric and enteric inflammations. It is unquestionably true, that in certain cases of gastritis, particular appearances, as redness, dryness, pointing, and a tremulous state of the tongue, are observed, but what I wish to impress on you is, that it is necessary that these phenomena should coincide with other symptoms".

In these views he is sustained, I believe by Andral, Louis, and our able professor of the Practice of Physic Dr. Power. Towards the conclusion of fatal cases of acute gastritis, hiccup, faintings, with the patient feeling as if sinking through the bed, or a gradual sliding down towards the foot of the bed, picking of the bed clothes, slight delirium, coma, cold clammy sweat, and cold extremities. The pains all cease a few minutes before death. Acute gastritis generally terminates in from 12 hours to three days, varied according to the nature of the exciting cause. If that be a violent poison, as is sometimes the case, its course must necessarily be rapid and fatal, unless promptly managed and judiciously treated. If produced by poisons death occurs earlier, from the violence of their action; producing, as they frequently do, almost immediate disorganization. Gastritis, though usually manifesting itself by well marked symptoms, is sometimes very insidious in its attack. Inflammation is developed, and proceeds to a fatal termination, in so obscure a manner, as to present scarcely any of the ordinary

manifestations of its existence. Dr. Abercrombie observes, "that the symptoms which attend acute inflammation, of the stomach, are liable to great uncertainty." Dr. Eberle mentions a case, in which the patient complained of intense pain in the head, with occasional slight delirium, transient darting pains through the chest, nausea, with an indescribable feeling of distress in the epigastrium; a frequent, firm, and contracted pulse; but without actual pain in the stomach, or other symptoms that could be regarded as characteristic of gastritis. The patient, in the course of five days sunk under his malady. On post mortem examination nearly the whole internal surface of the stomach, was found minutely injected, and large patches of the mucous membrane were softened, abraded, and, in some parts, very conspicuously thickened, and of a yellowish ash grey colour. No other local affections, whether in the abdomen, thorax or head, were noticed. Causes. — are either predisposing or exciting; Individuals who live in an extremely variable temperature are prone to this affection; hence

it is very common, and prevails in the acute Subacute and chronic forms in the United States.
Certain conditions of the atmosphere, especially when the atmosphere is cold and damp, or, even warm and damp. At certain ages as in infancy and childhood; the mucous membrane of the intestinal canal is very likely to become inflamed. A low degree of irritation from peculiar drinks, or diet will predispose to it; hence, those who are accustomed to big living or indulge in the pleasures of the table to excess; who drink Brandy and Wine, and eat chiefly made dishes, as do the French, are strongly predisposed to it. Weak individuals are most prone to inflammation of the mucous membranes, while the strong and most robust are more liable to inflammation of the Serous membranes. The exciting causes are, drinking large draughts of cold or ice water, when the body is in a state of free perspiration; — the habitual use of intoxicating liquors, hence its not unfrequent occurrence among the poorer classes, who drink the most indifferent kind, which is always, more or less, adulterated with

drugs of the most noxious kind, such as Sulph. Acid &c. Poisons, such as Sulphates of zinc and copper, arsenic, corrosive sublimate, and Opium &c. The ingestion of very large quantities of food of an indigestable character, especially during convalescence from any serious disorder. The suppression of habitual sanguineous discharges, metastasis of rheumatism and gout, external mechanical injuries of the epigastrium, as blows &c, have all been mentioned as exciting causes of gastritis.

Treatment.

With regard to the propriety of venesection different views have been entertained and expressed by authors; indeed the question of its utility is yet undecided. Dr Stokes regards it as a "mooted point" yet to be settled by future investigation. He remarks "we are very much in want of a series of well established facts to guide our practice on this points, and to inform us how far general bleeding is useful in acute inflammation of the stomach". The smallness and frequency of the pulse, observes Dr Eberle,

"must not deter the practitioner from the use of the lancet. On the contrary, when the existence of acute gastritis is unequivocal, this contracted state of the pulse ought to be regarded as the most urgent indication for prompt and copious depletion".

I think the rule given by Dr Watson in his article on this subject the proper one to be observed. It is the one, I should adopt, as being the most likely to be successful, if called to treat a case of acute gastritis, viz, "early in the disease, if the pain be severe, you must by the effect of venesection, notwithstanding the smallness and feebleness of the pulse; how much blood you are to abstract cannot be told before hand". Take away a small teacup-ful, keeping, mean while, your finger on the pulse. If the beat of the artery does not grow weaker; and still more, if it becomes fuller and stronger, go on with the bleeding, and take another cup-ful; and another, according to the circumstances of the case, and to the effect produced".

Our principal dependence, in treating acute inflammation of the stomach, is to be placed

in the judicious use of local depletion, — say by the application of leeches.

Upon the application of leeches the vomiting subsides almost immediately, — the epigastric pain and tenderness disappear, the cough and cerebral symptoms are relieved, — the fever subsides, — and the case assumes a more favourable aspect. These must be applied again and again, according to the duration and obstinacy of the symptoms.

The flow of blood from the leech bites may be promoted by flannels wrung out of hot water applied over the epigastric region. The application of leeches to children is sometimes attended with danger. It would therefore, not be proper to allow the bleeding to continue after the leeches have been removed. If the stomach will retain cold water it may be allowed in small quantities, or, what is still better, small lumps of ice held in the mouth and allowed to dissolve there, as it will relieve the urgent thirst and other gastric symptoms, that so torment the sufferer.

No food should be allowed of any kind

until convalescence. The patients strength may be supported by injections of weak chicken broth. If the bowels are constipated they may be relieved by warm water enemata; purgatives are always injurious. If, on the contrary, the bowels are loose and accompanied by much tormina, injections of an ounce of starch, to which half a drachm of tincture opii may be added, is to be administered. During convalescence, the the diet should be simple and unirritating, as any imprudence, may cause relapse, or, the disease to assume the chronic form.—

Webster

An Inaugural Dissertation on Intermittent Fever;

Submitted to the examination of the Provost, Regents & Faculty of Physic, of the University of Maryland; for the Degree of Doctor of Medicine:

By

Richard Henry Webster.

Febris Intermittens.

While the progress of general science is devoutly desired by an enlightened and real philanthropy, those who occupy the department of Medicine have, of necessity, their attention more immediately and intensely directed to the advancement of their favorite, because most congenial, branch of the tree of knowledge; which, unlike the mysterious tenant of Eden, grows, spreads, and produces, to supply the fruit of life and happiness.

Stronger and stronger by the venerable trunk, more and more numerous by the outspringing, divergent branches, green by the foliage ever, and

perpetually pendent over the boughs with wholesome, delicious fruitage! But our own favorite Medicine, one of the earliest, of the most extended shoots, how shall we increase its size, its length, its productiveness, and have it to be an athletic, vigorous arm stretched forth with still more abundant blessings to suffering humanity?

This should be one principle purpose and thought with the student of Medicine. The solution of this problem should be with him a living solicitude, following him through the entire progress of his professional career, noting all facts, watching all agents, and in the sequence of the most patient and laborious induction, confirming or rejecting the theories of the past, and amid the ele=

ments of the momentous present, projecting theories for the yet silent solemnities of the future.

In the outset, without either Medical knowledge or experience, he can hope for nothing from himself, but the possession of a becoming interest in, and a necessary taste for, the profession he has chosen; connected with appropriate diligence and docility. What his profession knows, he is first to inquire after and take possession of. And when he considers the intellectual acumen, the immense observation, the untiring industry and patience, the brilliant genius, the varied love, and voluminous writings of Medical men, who from remotest antiquity have toiled in this honorable department, he may not indeed flatter himself that it has

been expanded and adorned to the extent and glory of perfection; but he will not, with any show of reason, feel himself to be a=mong the disappointments and des=titutions of Medical poverty. On the contrary, he will properly rejoice in large treasures of useful science, and in possession of numerous promising means of usefulness: and while aware in certain form, and intensity of virulence, may yet hum=ble him with the evidence that he cannot do all for his fellow man that his heart desires; still, notwithstanding, in many happy in=stances his skilful practice will triumphantly illustrate the reality of his science, and fully gratify his almost benevolence.

Upon this theory of progress, then, the privileged pupil of the

learned and experienced Faculty, to which this thesis advances for the trial prescribed by venerated custom and collegiate law, should exert himself to display to his accomplished judges, who sit as janitors at the door through which he desires to enter to the robes and confidence of the public, the evidence that he has made himself acquainted with the existing theories, as laid down in the standard works of the profession, and as taught in the lucid and ample prelections of the erudite and honorable Faculty, upon whose decision is suspended his opportunity to aid as an humble co-operative in the future progress of the science he has studied, and which he now desires to make proof of in the matter of fact details of practical application.

Before penetrating to the discovery of new planets, beyond the scarcely conceivable limits of the immensity of the known astronomical world, bid Leverier, who, directing the almost infinite vision of the telescope by his almost superhuman theory and calculation, placed in the crown of science its most dazzling gem, and won for his own brow, the noble casket of his glowing intellect, a fadeless garland of imperishable fame; let the candidate for graduating honors, first learn the lessons of Copernicus, Newton, Kepler and La Place; without which Leverier had been sitting now, probably, in the dim shadow of twilight, elaborating vague problems and fruitless conjectures.

Would we seed, conscious of its innate vitality, secure its glorious development, into the beautiful plant?

Let it first concern itself with the preliminary solidity of base, and the adjunct of moisture and heat which are indispensable; and then, though for a time obscured by the very agencies of its developement, anon itself will appear, climbing up into the gorgeous sunshine, waving its tapering branches and emerald leaves in the giver, fresh air, and showering down its blossoms and fruits upon the alma mater, which cherished its infant energies, and sent them forth to utility and glory.

Intermittent Fever is one of the most ancient diseases of the Nosology. It is composed of three stages: beginning with a cold fit, followed by fever, and terminating in copious perspiration. It is remarkable, that so venerable a disease should still be subject to empirical treatment. For not only do

the old women yet assail it with their various and eulogized nostrums, and the zealous Thomsonians insist upon the unequalled virtues of lobelia and steam; but, even after the scientific labors of ages, connected with the most careful and patient observations, the regular practitioner has been unable to provide himself with a clear Pathology of this disease; thick mists yet lingering around and obscuring its Aetiology.

The scientific have bequeathed us a name, Malaria: but what is that? Taking those districts where the disease is most prevalent, the low, marshy, and flat lands of North and South America, the Pontine marshes of Italy, and the fens of Lincolnshire and Cambridgeshire in England, investigation has searched with the microscope and chemical analysis

for this subtle poison, in the erroneous belief, that the decomposition of vegetable matter, was the only source from which it had origin: and on which account it was formerly called marsh miasma.

But experience having taught the utter fallacy of this doctrine by finding the same disease in its most malignant type in sections where there was no decomposition going on, the attention of the scientific was naturally turned to the atmosphere of malarious districts. Yet after careful and repeated analysis the test proved insufficient to detect the presence of any new or foreign substance. Although medical men have failed in the position Pathology of Intermittent fever and Chemists in detecting the nature of its true exciting cause, the investigation has

not been without good results.

That this poison or malaria is not confined to marshy localities, that is that marshes are not essential to its production, I have before stated; but that such localities seem to be its favorite residence no one can deny except the inhabitants of those districts: for, like other poisons, it seems that custom destroys its sensible effects: and, therefore, a stranger from a pure atmosphere is more sensibly and sooner affected than one who from residence has become acclimated. This poison never ascends the atmosphere to any great height, but rather descends or keeps near the earth's surface. It is also capable of being conveyed by the wind from the spot where it was generated to some

other that might be free from it and healthy.

Now this may explain, in part, why low, marshy lands are more subject to it than high, hilly and mountainous districts. Let it be generated where and by what it may, its portability, together with its specific gravity, if I may use the term, at once determine its locality; and as marshes, in part, are surrounded by flat, even lands, the malaria may be spread by the wind over the whole extent of their surface, meeting but little resistance until the running streams, and green foliage of highland forrest, thow boundaries of health, check its onward progress.

Not wishing to give the Pathology of any one or Intermittent

fever, I will reply, at once, to its classification, symptoms and most common complications.

Nosologists all give three distinct species to this disease. Thus quotidian, tertian, and quartian agues: each type having a character peculiar to itself. Thus, in quotidian ague the paroxysm occurring in the morning of each day, at the same hour, with regular intervals of twenty four hours: while the tertian, that type thought most common in this country, observing the same regularity, has its paroxysm commencing in the afternoon on alternate days, having an interval of forty eight hours: the quartian making intervals of seventy two hours with paroxysm at night on every third day. This being

Regarded as the rule, the ex=
ceptions are numerous. Thus we
see double quotidians, or two par=
oxysms in the twenty four hours,
or double tertian where the par=
oxysms occur every day, but at dif=
ferent hours, that of the first
and third being the same,
while the second and fourth
are the same. In like manner we
have double quartian, where the
paroxysms occur two days in suc=
cession, leaving the third day free,
returning on the fourth as it was
on the first, and on the fifth as
on the second, leaving the sixth
as the third free, and so on.

There are other modifications;
and, indeed, so many that the
rule to the young practitioner be=
comes almost worthless; and in fact
this seems to be of little consequence

as they all require the same treatment. There is one variety of this disease known by the name dumb ague, in which the paroxysm is incomplete. Thus a patient may have fever and perspiration follow without any previous chill: or, to use his own language, he has pains in his bones, headache, sickness at the stomach, sensations of cold creeping over him but not a regular shake. These symptoms may take their departure without any treatment, or they may grow worse, if the patient be still exposed to the exciting cause, until they take on the regular type. The diagnosis of the disease is simple. So much so that a person who is affected with it applys to you for medicine to stop the ague;

that is, if he apply at all.
The first symptoms of an approaching paroxysm are debility, listlessness, pain about the epigastrium, a disposition to extend the limbs, yawning and frequent sighing; a sense of chilliness creeping along the spine, the blood forsakes the superficial capillaries, the surface becomes pale, with the skin drawn up into little prominences, such as any one may familiarise himself with by following Doctor Franklin's mode of bathing; presently the sense of coldness becomes insupportable, the whole frame is shaken, the teeth chatter, and if they be artificial may drop out: the nails, lips and the end of the nose turn blue, the eyes are dull and hollow, with oppression about the præcordia;

pains in the head, and in the back near the lumbar region; or there may be universal pain through the body.

After these symptoms of the cold stage have lasted for some time, for they vary in length as well as intensity, they gradually disappear, the shivering ceases, the body becomes warm and the surface resumes its natural appearance. This is called reaction: but it does not stop here. The hot stage is but commencing. The face becomes flushed, the skin dry and hot, the pulse full and bounding, with throbbing of the carotids, and intense headache; respiration hurried, restlessness and general uneasiness, sometimes delirium.

These symptoms pass off in

what is called the sweating stage, which makes its appearance first upon the face and extremities, and becoming general and very copious to the entire relief of the sufferer. Thus may end one paroxysm; from which to the commencement of the next, is called the intermission. But all do not thus end: the sweating may be postponed for days, or there may be perspiration with slight remission of fever not amounting to an intermission. In such case it is a remittent fever; which is so closely allied to intermittent, that we must notice some of the peculiarities existing between them: and to make ourselves intelligible on this point, let us suppose three persons exposed to miasma at the

same place, but under different circumstances. Let the first be exposed under a light, moist atmosphere, at night. He will have remittent fever; which is liable, if it terminate happily, to pass into intermittent. The second may be exposed at the same place but for a shorter time, and have but agues: which with improper or no treatment, may take on the remittent type. While the third may be exposed for days under a dry, heavy atmosphere leaving the place affected before night, and escape without a single unpleasant symptom.

The susceptibility of the system to be affected by this unknown agent, while laboring under other diseases, has been no=

liced and taken advantage of by some, for its prophylactic properties. Thus it has been recommended to send persons predisposed to tubercular deposites into malarious districts.

But such chance complications, it is not my purpose to mention here: but rather those more constantly with or arising from old and more chronic cases of intermittent. Such as oedema of the lower extremities, commencing in the feet and ancles; enlargement of the spleen and liver giving rise to ascites. When this symptom is present, the prognosis is more grave, there is also general anaemia, best marked in the lips, and gums and the sclerotics of the eyes, the last being of a white, ashy colour.

The enlargement of the spleen and liver, if not visibly to the eye, can by very accurately traced by percussion. With this physical aid we can judge whether the medicines we employ be inert or beneficial, by determining whether or not those organs gradually return to their healthy and normal sizes.

As to the treatment, it seems scarcely necessary to add, that it is derived only from experience. The remedial agents may be divided into two classes:- Curative, or those that stop the paroxysm; and Prophylactic, or those that prevent its return.

If this division be made, the first class comprises but few agents, and they of but

minor importance. Venesection, stimulants, opiates or emetics have been known to cut short a paroxysm: but, in this country at least, the paroxysm will cease if nothing more be done, than what nature herself prompts the patient to do: for, in such cases you will find him, during the cold stage lying in the hot sun, getting near a large fire, or, which is more delicate, if not more convenient, covering himself in bed and having warmth applied to his body with bottles of hot water, or bricks, or hot air, and using warm drinks; and then in the hot stage removing all artificial heat, throwing off the bed clothes, partaking freely of cold drinks,

until the perspiration comes on and terminates the paroxysm.

Although the disease, at this point, is considered to be merely intermittent as to its appearance and sensible effects, but yet deceptively lurking in its hiding places, and preparing for another assault; yet what evidence have we of the actual existence of the Febri? And why might not the patient be regarded as convalescent? And the remedies presented range properly under the prophylactic head? Thus constituting the second, or prophylactic, class the more important of the two, and containing the most numerous agents.

Not stopping to mention each separate agent, that has been employed with repeated success, I will proceed to those most popular with the profession at present, cincho=na, and arsenic. The first of these has been called a specific: but, as with all other agents, it sometimes fails to prevent the return of the paroxysm: although in most cases where an emeto-cathartic is given in the commencement of the disease, followed during the intermission with a preparation of this bark, the sulphate of quinia, in doses from gr. iii to dr. v repeated every three hours until the time for the expected paroxysm shall have passed, commencing again the day on which you

expect it to return, six or nine hours before the time for its regular reappearance, giving it in the same manner, you may stop the disease.

Cronic is not succeed, however, then that preparation of arsenic known as Fowler's solution, the Liquor potassae arsenitis U.S. is next entitled to respect; the dose of which is six to eight drops, repeated two or three times a day, until some of its unpleasant effects are produced. These two agents receive, at the present day, in the treatment of this disease, more confidence than all other.

Careful observation, aided by a progressive science, and conducted by the patient skill and unfaltering genius of a

profession, ever quickened by the philanthropic and noble object of its pursuit, the amelioration of human suffering, and the consequent enlargement of human comfort and happiness, will no doubt, yet succeed in illustrating the dark mysteries of this wily foe of man; and thus relieve the Medical practitioner of the uncertainties which now embarrass him. Until, then, he must endeavor to proceed with care and prudence, in the existing twilight, and content himself with honest, hearty exertion, and ever enduring hope.

Should he see the humble negro, a resident of one of our malarious districts, yawning, stretching, and shivering in the hot beams

of his beloved sun, until his ague ceases, and then enter the domains of the culinary queen, in quest of his dish of fat bacon and cabbage; he must regard such phenomena as well as the experiments of the most splendid practitioner, and the theories of the most illustrious schools. For how does he know where the truth will be picked up? And how can he forget, that the tumbling of an insignificant apple, was an epoch in that exact and magnificent science, Astronomy; and that the rotting of the potato has perplexed the administration of an empire on which the sun never sets!

An Inaugural Dissertation

On

Phthisis Pulmonalis.

Submitted to the Examination

OF THE

Trustees, Regents and Faculty of Physic

of the

University of Maryland

For the Degree of

Doctor of Medicine

By

Laurence J. Shaw

of Baltimore Md.

An Inaugural Dissertation.

On

Phthisis Pulmonalis.

Submitted to the Examination

OF THE

Provost Regents and Faculty of Physic

of the

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By

Laurence J. Chabot

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An
Inaugural Dissertation.
On
Phthisis Pulmonalis.
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OF THE
Honorable Regents and Faculty of Physic
of the
University of Maryland
for the Degree of
Doctor of Medicine
By
Lawrence J. Giddings
of Baltimore Md.

To

William Power M.D. Professor of Theory and Practice in the University of Maryland.

Respected Sir

There is not an individual in the whole profession, to whom I could with greater satisfaction dedicate this thesis than yourself. I have not aimed at elegance of style, for the nature of my subject would not permit it; but if I have not embellished it with the flowers of Rhetoric, I have endeavoured as far as possible to have my mind upon the subject relying upon your lenity for what errors I shall have made.

Let me not omit here to mention that your Ardour and Zeal for the profession and your devoted and unceasing labours for the Students' Advancement, have won their highest

esteem and warmest applause.

Accept this Essay as a small tribute of my respect and may your talents continue to be actively engaged in the pursuits of knowledge and may the result of your labours be productive of an universal melioration of the lot of man.

My respects for your learning
Esteem for your talents and
Wishes for your happiness.
L. Justinian Chabot.

Gentlemen,

Phthisis Pulmonalis or Consumption is known to mean the wasting away of the lungs by tubercular matter, it would be an error to suppose that this disease is restricted to the lungs in this case alone. An analogy having been established between scrofulous and consumptive habits by many writers some of whom have examined the lungs of scrofulous foetus and found them with tubercles, there is no room for doubt that the formation of tubercles is always linked with the existence of scrofula diathesis. Phthisis pulmonalis very often makes its approach imperceptibly and it makes very serious advances indeed before the patient himself is at all suspicious of his situation, Consumption, from very accurate calculations is known to cause about one in every five deaths in Great Britain, the character

given to consumption by a late nosologist is "Corporis emaciatio et debilitatio, cum tussi, "Febre hectica, et plerumque Expectoratione purulenta

Symptoms and Physical Signs.

When Phthisis arises from tubercles, it is characterized by a short, tickling, hollow cough by a dyspnœa; and by an indistinct feeble, quick pulse; the two last symptoms are much increased by bodily exertion, more especially towards evening, the patient now experiences a heat, and dryness of the palms of the hands; and he is assailed by an uneasiness in one side, very frequently the left, he generally sleeps upon the diseased side; for if he attempts to lie on the other, he feels an unaccountable restlessness accompanied by a teazing cough and sometimes by a sense of suffocation. In bed his respiration is particularly laborious, his sleep is disturbed, and he

is tormented by disagreeable dreams, he is not refreshed by his slumbers; but awakes under the influence of a general lassitude, with a profuse moisture upon his forehead, neck, and chest. The languor with which he awakes in the morning, he continues to experience more or less during the day; he complains of faintness, head ach and occasional sickness at stomach; he is repeatedly seized with slight rigors succeeded by flushings of heat, which exhibit a constant change of colour of the face, the appetite still remains not very materially impaired, though a relaxation of the muscular fibre, and a considerable degree of emaciation, is now very perceptible; at the approach of noon and night he complains most of thirst - and at those periods his cough is much exasperated; this stage of disease is often little attended to, and frequently

passes over before any practitioner of medicine is consulted; the patient now experiences an aggravation of all the symptoms already enumerated. his cough is more vexatious and is attended by an expectoration of white froth, which in the morning assumes the consistence of tough phlegm, of a salt and sometimes a sweet taste, the velocity of the circulation continues, the strokes of the artery are stronger and fuller; and succeed each other in such a manner as to give the medical attendant a clear persuasion that the blood is transmitted through the lungs with much difficulty; the patient is now more frequently assailed by recurring rigours, and he does not obtain any diminution of his fever either by sweating or evacuation his thirst is increased; his difficulty of breathing is now a very distressing; and is generally accompanied by an acute pain

in the thorax below the left clavicle, a deep pain is also felt below the scapula if he now makes any attempt to lie down on the sound side, the sense of suffocation which he experiences, and the incessant cough which immediately ensues, preclude the possibility of his enjoying one moments repose; his appetite is much diminished, and his bowels exhibit a tendency to constipation, the wasting of muscular fibre becomes every day more apparent and he approaches rapidly to the last stage of the disease if the patient be a female, the cessation of the catemenia or menses is another very strong proof that the patient has phthisis when we are sure they are not pregnant nor beyond their period, it is remarkable, however that neither at this, nor at any subsequent period of the disease, do they entertain any terrors about its issue he seldome complains but of the

cough, he is supported by the idea, that if it could be removed, he should be well, and this cheering hope remains with him almost to the last hours of his existence, In addition to the symptoms described above he now labours under purulent expectoration occasionally mixed with blood he experiences a regular exacerbation of the symptomatic fever towards twelve at noon and the same hour at midnight he feels however, a considerable remission about four or five O'clock in the afternoon, and a more complete solution of the fever, by a partially profuse perspiration, about the same hours in the morning, his loss of strength and muscle are every day more apparent, his difficulty of breathing, however is not much increased nor are the pains in the thorax or side so frequent or so violent as in the preceeding stages of the disease,

a considerable portion of the matter which he expectorates generally sinks in water; though this circumstance is by no means an infallible proof of the presence of pus; since pus, and mucus exhibit phenomena according as they are freed from, or connected with air one very good test for detecting pus in the expectoration is to put a minute quantity of the matter expectorated between two plates of glass; hold the glass close to the eye and look through it at a distant candle light, having a dark object behind it the pus like the blood, contains globules; and these globules when examined through transmitted light, will exhibit prismatic colours somewhat resembling those of the rainbow, there is still a better test what is: in a solution of potash, put the expectoration, and if it be pus it will sink while mucus will swim at this stage of the disease the

patient has less thirst; and his appetite is not much diminished; although he rapidly wastes away in flesh, he is consumed by the wasting discharges of perspiration and diarrhoea, alternately with each other his tongue becomes more clean with specks of white furr interspaced upon it; the thirst is still less oppressive; the white part of the eye assumes a beautiful, bright appearence; and there is a very considerable dilatation of the pupils; this last symptom is a very certain characteristic of the presence of Pulmonary consumption at a preceding period of the disease, and more especially at this. he exhibits a circumscribed flush upon one, and sometimes upon both cheeks, particularly after taking food, or after a little repose, his expectoration increases in quantity, and becomes extremely offensive, from the shrinking of his

muscles, there appears a great fulness of his vascular system, his nails assume a crooked form, and bend inwards; and his hairs begin to fall off, he complains much of an uneasiness, sometimes of a violent pain, in his legs, and in the soles of his feet his ancles become œdematous, his wasting discharges, continue to increase, painful aphthæ of the tongue and mouth with a slight eruption upon the lips, assail the sufferer about a week or ten days befor his death, which is wound up by an increase of fever, and by the supervention of delirium

Auscultation

Indicates the physical density of the tissue, and the functional play of the organs and the obstruction which impede the passage of the air in the lungs, the signs of auscultation are much more functional

than those of percussion, you may apply your ear directly to the chest or you may interpose between your ear and chest of the patient a tube. The application of the ear to the thorax is preferable to the tube when you wish to examine a large portion of the chest rapidly as it saves much time, in the deceased subject you will find that the strongly marked sign are very easily recognized; when a portion of the lung is rendered solid this denominated hepatization that is solid like liver, the presence of tubercles follow, in such a part of the lung, supposing the solidification complete, no vesicular breathing will be audible, if the solidification encloses a considerable bronchius, and comes near the surface of the chest, partial breathing but where we have the entire side of a lung hepatized no breathing will

be heard on that side of the chest as air enters only to the other lung. Respiration, is the liquid being contained in the bronchial tubes and their ramifications, with pus, mucus, or liquid of any kind, the rude respiration is one of the most interesting varieties of the respiratory sounds for it occurs in those varieties in which lesions are not yet much advanced, and a portion of the pulmonary tissue remains permeable to the air hence it is a sign of the earlier stages of Phthisis, of the commencement of pneumonia we only find the air vesicles, and the substances which connects them, become inflamed but whenever we find gurgling during respiration or during coughing, we conclude there exist a cavity, from the rude respiration next comes the vesicular murmur; which may be exaggerated or enfeebled, but still retain its essential characters and when the cavity is large the

metalic sound may often be heard.

Percussion

In the method of estimating the density of the viscera contained within the cavity of the thorax by taping lightly upon its surface, the rationality is very simple the lungs occupy the greater part of the thoracic cavity and are filled with air; a light tap upon the exterior of the chest gives a clear, full, hollow sound when the patient is thin and his skin is very sensitive, he will not bear a smart tap without inconvenience; and on the other hand if very corpulent or the subcutaneous cellular tissue be infiltrated with serum, the sound will be quite dull and will not truly represent the condition of the internal organs, in order to obviate this chance of error to the observer and inconvenience of the patient, a plex=imeter is interposed, its only utility is to

increase the body of sound by giving more resonence to the elastic particles of the chest; the forefinger of the left hand is the most handy but a piece of Gum-Elastic may be used still under ordinary circumstances, the fore-finger is the best one which can be employed and is the best one for the patient from its ready adaption to different parts and its application to intercostal muscles but some times you will find the Gum-Elastic handy when a female does not like the application of the finger to her skin. Both sides of the chest must be accurately compared by gently tapping first on one side then immeadiatly on the opposite when the lung having tubercles is struck or percussed, it will give a dull sound showing that the cavity is filled up with tubercular Matter, and not air. this difference of tone should be carefully noted, as an important particular in the

in the diagnosis of the Phthisis Pulmonalis.

Analysis of the Blood

The Blood being established as the source, it would seem that the next most important means of elucidating the pathology of this disease would consist in the analytical examination of the blood of consumptive patients and the comparison of it with that of healthy and of those who labour under other diseases of analagous diathesis; In the analysis of the blood of tuberculous persons as meager, pale, serous and deficient in red globules, as the person emaciated, weak and deficient in complexion, In the blood of the consumptive the serum is found viscid and sometimes in proportion of more than 5 to 1 to the crassamentum in such blood the surface is formed of clot dotted all over with numerous small white specks of

solid matter, that has been thought to be tuberculous, In healthy blood when coagulated presents the appearance of a little more crassamentum than serum; though this varies some what in different individuals who manifest no actual deviation from health, that of the most athletic presenting the greater portion of crassamentum and being of a deeper colour, that of the delicate most abounding in serum, and being of a paler colour. The crassamentum is composed of two parts, the red globules and the fibrin, the serum is composed of albumen water and saline matter, the excess of fibrin indicates inflomatory action, and what is an abnormal proportion in phthisis is by Lacuine estimated at three in the thousand by Berzelius at less than one to the thousand by Fourcroy, varying from one to four in the thousand by Dory one and a half, by Nasse, three and a half by

Muller, Andrall and Gorevett three, the globulous and serous diathesis shall be illustrated, the Globules constitute the richest principle of the blood, and persons who abound in them, are distinguishable by ample and well proportioned chests; thick rough skin; firm muscles superior strength, and generally, by dark complexion and hair, The serous bloodead have slender and badly proportioned chests; thin smooth skin; slender and relaxed muscles inferior strength fair complexion and light hair

Pathology of Tubercles

Tubercle is a white opaque or yellowish body. and when softened it is converted into a thick pasty yellow liquid of a dull yellow colour, and of a heavy odour the matter finds its exit by ulceration through the bronchial tubes; tubercles do not always soften and discharge by the bronchia for they some-

times when the patient's health is improved become hard and dry; the watery particles pass off, and the earthy matter increases in quantity and a calcarious mass is left hence we see consumptive patients cough up with their expectoration small round lumps of stone resembling lime, these lime stones are often found in the lungs of persons upon whom post mortem examinations are made they may be entirely absorbed, and the patient may recover besides these tubercles, you will often find in the lungs a number of granules of finer consistency almost as hard as cartelage, semitransparent and of a bluish gray colour, these granules are sometimes called miliary when they are about the size of a millet seed they unite, form masses of a pale yellow colour, and of the consistancy of cheese, in which state they are named crude tubercles then formation

is explained by Dr Carswell thus the membrane lining the air-passages secretes from the blood, not only the matter of tubercles but its own proper fluid; whence it sometimes happens that a dull yellowish point of tubercular matter becomes enclosed and set, as if it were, in a small gray tough, semi-transparent mucus. The masses are formed by growing together of many smaller tubercles, and the areolar tissue, with the other tissues which originally seperated these tubercles. the condition of the surrounding tissue is very various if the case is purely constitutional;

The blood of the tuberculous, on coagulation presents a small, pale, firm clot, floating in an excess of serum. "Andral says that in phthisis the fibrine is always abnormally increased while the globules are as constantly deminished and these disproportions keep pace with the progress and intensity of the disease; when tubercles

are still crude, the increase of fibrin is scarcely appreciable; when they begin to soften, it is more marked; and at length when vomica are formed the portion of this element sometimes rises to six parts in a thousand the red globules, on the other hand, follow the very opposite directions, their decrease is progressive from the commencement to the close of the disease: the difference often exceed twenty; in addition to this we have abundant evidence that persons of a tuberculous diathesis, are deficient in red globules not only in progress of phthisis, but prior to its onset this anæmia is indicated by their waxy aspect or pale colour of the blood

Causes

Pulmonary Consumption may arise from hemaptysis, catarrh, Pneumonia, asthma, tubercular diathesis, violent passions affections of the mind; as grief, disappointment, anxiety, great

evacuations as diarrhoea, onanism, and too great an indulgence ~~in~~ excessive venery, it is a general opinion that a combination of all other supposed causes of the disease, bears an infinitely small proportion to the number of cases constituted by the presence of tubercles. a person with a long neck narrow chest, flushed face, and a delicate skin is described as being the most subject to hemoptysis it is also strikingly true that this identical habit is pointed out; as the most liable to scrofula. If hemoptysis without being attached to a habit supposed to be scrofulous, did generally produce pulmonary consumption we should find consumption almost succeeding to injuries done to the lungs this is not the case, the evidence of army surgeons and experience, will go to prove, that wounds in the lungs whether inflicted with a musket ball or with

the point of the bayonet seldom or ever terminates in pulmonary consumption "Dr Rush "says he met a British officer a few days after "the battle of Brandywine who informed him that "the Surgon General of the royal Army, had assured "him that out of twenty four soldiers, who had been admitted into the hospitals during the campaign of 1776 with wounds in their lungs twenty three had recovered. ~~respecting the~~ respecting the supposed operation of catarrh and pneumonia in the production of pulmonary consumption ~~seldom or never follows~~ the a more violent inflamation of the lungs cannot be induced by catarrh or pneumonia, than ~~that~~ which might arise from a ball or bayonet piercing through the substance of that organ; and if it be true that Pulmonary consumption seldom or never follows the injury caused by those bodies, it is thought improbable

that the disease should be produced by an injury comparatively trifling unless such an injury be applied to a habit predisposed to pulmonary consumption.

Respecting the influence of asthma in the production of Pulmonary consumption this disease and asthma are generally observed to make their attacks the former at an early and the latter at an advanced period of life; besides asthma is more frequently a spasmodic disease, and will sometimes yield to the administration of antispasmodics but upon the supposition that the means employed afforded no relief, yet the asthma will continue for many years, without ever exhibiting a pulmonary consumption: further hooping cough which is a very severe pulmonary affliction seldom or ever terminates in Pulmonary consumption.

Onanism, this secret and pernicious vice of youth which undermines the constitution and sows the seeds of Pulmonary consumption, that no wonder so many young men enter a premature grave, it is a fact that cannot be too well estab-lished, that no existing cause so rapidly de=velops these diseases, as the propensity to Solitary deliriums however remote the predisposition to Phthisis may be, and that has often been attributed to hereditary diseases or contagion which has had its origin solely in an adher-ance to this practice, and that many children born of delicate parents, and who have even been delicate themselves, have had their Chests and constitutions strengthened, by their mere continuence in a chaste and innocent course of life although, in their infancy, they may have been regarded as consumptive is it then to be wondered at, that so many

persons die of consumption, attributing their death to delicate constitutions, if they waste as soon as they have the power, the little strength that nature has bestowed upon them. By this vice according to Sydenham the organs of respiration are the weakest of all those belonging to the human race, two thirds of mankind die of diseases of the lungs; and the most common period in which young persons resort to these vices, is precisely that where in the chest exhibits the greatest susceptibility to all the above causes of consumption; we may add* sleeping* as a contagious*, with consumptive persons; this has been the cause of the death of meany who only date from sleeping with consumptive persons having always previous to them, enjoyed good health, and not the slightest symptoms of phthisis.

Treatment

It is towards the first period of Pulmonary phthisis that we should direct all the efforts of our noble science, although persons have recovered from consumption from under very discouraging appearance, and therefore we should never wholly despair, it is our duty while life lasts, to persevere in our efforts,

As the blood of the consumptive patient has been found to be deficient in red globules or empoverished, the principal and only thing is to change the consumptive diathesis by enriching or encreasing the red globules. This must be accomplished by a treatment calculated to impart increased functional vigor, and activity to defective and weak organs, we can resort to more immediate benefit, the lungs in Phthisis bear charge of this disease and as remedies which increase the excretion will

also increase the action and determine to the organs they act upon, such articles should be selected as act mainly upon the excretory organs that the lungs may thereby be relieved by making them as far as possible perform vicarious exercion another consideration is the medium should be a tonic, diaphoretic, and diuretic that act upon the kidneys and skin and this they should seldom do to any great extent but of all the remedies that have ever been given for the cure of Phthisis pulmonalis none deserve the praise nor should be relied upon as much as iron; Iron is a remedy directly adapted to reinstate the deficient constituents of the blood, by increasing the colouring matter or red globules, may be seen from its use; Chalybeates then in any form may be used with advantage. also Iriol mass made

into a decoup possesses great advantage owing to the Iodine it contains, Iodine is found in Oysters. thus it may be seen why it is proper to give Oysters in their uncooked State Counter Irritents in this case will be found of the greatest avail in the form of tartar Emetic Ointment, by which the patients Chest may be kept running for some time, as regards the Hygenic treatment, it may be proper here to state that this is so essential that it would be next impossible to be cured without this most important auxilary, the first is pure atmospheric air which we breathe to be healthy it is necessary to have nothing but a close proportion of Oxygen (one volume) and Nitrogen (four volumes) Accidental ingredients of atmosphere, besides these gases named, sometimes contain other substances such as carburetted hydrogen and

sulphuretted hydrogen, no one will doubt the influence which air must have over us nor that it is susceptible and does take up a great variety of articles, many of which are pernicious to health as I said before, no one will doubt the effluvia arising from marshy grounds, decayed animal and vegetable substances confined or unwholesome air, where many persons have breathed with no ventilation; also air impregnated with the fumes of metals, it proves extreemely hurtful to the lungs and often corrodes the tender vessels of that necessary organ.

The Diet should consist principally of milk, oysters, beef, rice, Mush and milk, and good malt liquors, such as beer, porter, and ale; of course raw oysters would be preferable to those cooked as

the heat in cooking deprives the Oysters of the Iodine, only for which they are taken in Consumption, all food and drinks should be taken in small quantities, as all the above named food is light and of a nutritious quality from which consumptive patients may receive much benefit, that is before the disease is properly set in; if these remedies are not applied in the incipient stages they will be but of little avail. An account is related by a medical gentleman, of a man in the last stage of Pulmonary Consumption his wife having lost her infant to whom she was then giving suck in order to get relief, she asked her husband to draw her milk or in other words to suck her breast and strange to say he was entirely cured of his consumption by this we may see the benefit derived from a milk diet.

all food that should be avoided in this formidable disease and such as will advance its progress is, hog meat in any form such as pork, either fresh or salt, bacon and ham this species of meat, must be most strictly abstained from, as persons who are of a scrofulous diathesis are very readily taken in consumption from its use, there are many other things to be mentioned some of which are cabbage, fish, crabs, spiritous liquors, in short the patient should eat nothing that is either heating or hard of digestion; the beneficial and essential part is exercise; indeed this is so important that even when the disease is far advanced a journey to a warm climate has been the cause of the patients entire recovery exercise such as give the body a great deal of action without much fatigue as the motion of a

vessel or a carriage is the proper motion, another thing is a long journey where the mind shall be amused by a continual change of objects is greatly preferable to riding the same road over many times, all riding must be avoided in damp and cold air always remembering to wear flannel next to the skin; this is too important a hygienic treatment to be neglected, wet feet, damp beds and damp clothing, night air, more consumptive patients date the beginning of their disorders from wet feet than any other causes although among the things to be avoided as a hygienic means are excessive evacuations as sweating diarrhoeas fluor albus, an over discharge of the menstrual flux and giving suck too long; persons of a consumptive diathesis by paying attention to the above hygienic treatment may often escape this formidable disease.

An Inaugural Dissertation

on

Acute Hydrocephalus

Submitted

to the examination

of the Dean, Regents and Faculty

of Physic

of the University of Maryland

for the degree of Doctor of

Medicine

By

John Edward Fowler

of Harrisburg, Dauphin Co. Maryland

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By

John Edward McFowler

of Salisbury Somerset Co. Maryland.

To

Samuel Chew M.D.

My able Preceptor and Professor
of the University of Maryland

This Dissertation is Dedicated,
With the greatest respect for his
Talents, and gratitude for
his Kindness.

It is not my purpose to enter upon any minute examination or discussion of the subject which I have proposed to take up as a theme of speculative inquiry; but merely to give in a short and cursory manner the pathology, prognosis, diagnosis, predisposing and exciting causes and treatment, with the morbid appearances on dissection as stated by the generality of approved writers.

The attention of medical writers has been directed to the subject of Hydrocephalus from the days of Sydenham to the present time, without any perceptible advancement, with regard to its appropriate modification or accurate discrimination, and without any confirmed or specific mode of treatment.

In defining hydrocephalus I will be governed by the ancient authors who for a convenience of description, have defined it into internus and externus.

Hydrocephalus externus is a collection of water between the membranes of the brain. Hydrocephalus internus is when the water is collected in the ventricles of the brain producing apoplexy and other cerebral derangements.

The pathognomic symptoms given by most writers are pain in the head, stupor, dilatation of the pupils, frequently nausea and vomiting preternatural slowness of the pulse and convulsions. Hydrocephalus is a desease almost peculiar to children, rarely known to extend beyond the age of six or seven though it has been known to attack children from the seventh to the fourteenth year of their life.

This desease prevails especially among children of a scrofulous diathesis and hereditary predisposition

It has been observed by many authors to pervade families affecting the greater part, or all of the children at the same period of their lives, shewing evidently in most cases

that the desease depends on the general habit more than any local cause or affection, though it is supposed by writers of eminence that hydrocephalus depends more on violence done to the brain externally than to any debilitated state of the system.

The causes of the desease may be of a phlogistic or chronic character. By the generality of writers it is regarded as a desease of a highly increased action a notion has always prevailed among writers that the absorbent system by a high state of inflamatory action in the parts affected suffers a state of morbid debility, in which the desease originates. The exhalent arteries throw out more serous fluid than the absorbents can possibly take up — this is consistently supposed to be the cause and effect in all dropsies

In drawing conclusions between different authors, it would seem proper and rational to suppose that hydrocephalus in many instan-

-ces is the consequence of inflamation of the brain: in other instances it would seem to arise from an impoverished state of the blood or topical injuries if admitting this to be a fact we are inclined to believe that cases produced by debility alone are not very frequent. The indiscriminate likeness abiding between the characteristic symptoms of inflamation of the brain and those which form the first stage of acute hydrocephalus seem to point out a strong evidence of the desease being of an active inflamitory character.

The good effects experienced by blood-letting and the inflamatory appearances which the blood exhibits in such acute and primary inflamations, are proves positive of its inflamitory character, which rarely or never occur in debilitated or impoverished state of the ~~blood~~ system. Hydrocephalus as has been stated above prevails chiefly among children from the second to the fourteenth year of their lives, after which period it rarely or never occurs.

From the circumstance of hydrocephalus attacking very young children renders the diagnosis very obscure in most cases

Hydrocephalus is divided by most authors into three different stages; by others it is divided into four; but Doctor Watson in his able treatise upon this subject restricts the division into two for all practical purposes; it might be supposed that these varieties or divisions are laid down for arbitrary purposes, although it is noticed in a great many cases of acute hydrocephalus, that the symptoms of the different stages might be blended together or some might be wanting

The symptoms characterizing the premonitory stage of acute hydrocephalus are those consisting chiefly of a deranged state of the nutritive functions, the patient losing his appetite, his tongue coated, breath offensive, nausea and vomiting, parched tongue, hot, dry skin, headache, throbing of the temporal arteries and ~~with~~ very quick pulse, the symptoms of the first stage here described, having irregular

exacerbations and remissions characterizing in some degree a remitting form of fever.

It is of great importance for the safety of the patient to distinguish or recognize acute hydrocephalus in its premonitory stage; having the symptoms above described in the young child to be in most cases the premonitory symptoms of acute hydrocephalus: but such symptoms are by no means considered by Dr. Watson to be always followed by acute hydrocephalus nor he says is acute hydrocephalus always preceded by such symptoms

In very young children the incipient stage of the disease is observed by unnatural wakefulness, frequent crying and sudden screaming occasioned by severe shooting pains through the head which gives warning of the approaching disease, with these and other affections of the head - we mark an hereditary predisposition

It appears to have been a controverted question whether the derangement of the digestive organs is or is not the cause of the affection of the brain or whether

both disorders are not the common effect of the same cause; the alimentary canal is in most cases found to be much affected — hence cholera infantum of long standing is frequently followed by hydrocephalus.

It is considered that the stomach and bowels are more liable to be acted on by injurious influences than the brain — therefore if such is the case hydrocephalus may be considered to originate from such derangements, however such derangements of the stomach and bowels, come on and last and indefinite time and runs a protracted course without approaching to hydrocephalus; and hydrocephalus frequently makes its attack and runs its course without any apparent abdominal derangement.

The premonitory symptoms of hydrocephalus are subject to various changes — the most prominent and constant symptoms are severe shooting pains through the head, restlessness, disturbed sleep, grinding of the teeth, and with loud screems indicating the disordered state of the brain, also with

a frequent pulse, hot skin, vomiting, white tongue, offensive breath, stools green or black, and loss of appetite — these symptoms may last but a short time and run rapidly into the second stage.

Considering the premonitory symptoms of the first stage as given here answers to the period of excitement, or true inflamatory stage modified and shown in an otherwise healthy patient.

The second stage of hydrocephalus is characterized by a collapsed state of the system, with the symptoms directed especially to the head, the pulse become slow, irregular and variable, with the slowness of the pulse comes on coma general lassitude and insensibility, dilated pupils, imperfect vision, light no longer troublesome, the child lies on his back undisturbed by noise, though frequently aroused by exclamations and cries indicating severe pain, convulsions frequently occur, spasmodic twitchings, paralysis &c urine and alvine evacuations are involuntary, with these are joined the common symptoms of a continued

fever, manifesting in the first stage a remitting form passing from thence into a continued fever

In describing the third stage of hydrocephalus we can not give any material change in the characters of the second and third stages of this desease, only with regard to the pulse which is in the second stage preternaturally slow, becomes in the third stage very rapid. With almost indiscriminate beats of the pulse the child continually rolls its head from side to side, making perpetual moans with his hand waving in the air or applied to the head, generally with paralysis of the other side

In consulting different authors upon this subject we find various opinions expressed especially between the ancient and modern writers, in describing particularly the third stage.

We notice that Dr Cullin, Rush, Brown, Thomas and Gregory give different views in many respects with regard to the pathology and diagnosis of hydrocephalus, to what Watson and

other modern writers at this time do.

I have alluded to the greater part of the symptoms which exist in hydrocephalus (as far as my feeble abilities will allow) more especially in the order which they should appear, first in the premonitory stage, second those which characterize the second and lastly those which characterize the third.

I deem it unnecessary to treat more upon the pathology and prognosis of hydrocephalus. The common observation of the medical world has stamped its character as being the most formidable desease to which children are liable, for when it has passed into the confirmed stage without treatment it is always hopeless

It is certainly a melancholly thing to consider how little this desease is under the controll of medical treatment — such cases are truly deplorable. (Before entering upon the consideration and plan of treatment it is necessary to remark that the chance of recovery is always greater in

proportion as the desease is detected early, the chief object and most important in this desease is its early detection so that an opportunity may be afforded to check the desease before it passes into the second and third stage.

In the treatment of acute hydrocephalus the chief indications are, in the first ~~stage~~ or premonitory stage, to reduce the inflamatory action by lessening the force of the heart and arteries, and in the advanced stage to promote absorption. In the first stage we trust chiefly to blood letting and purgatives, such as calomel, jalop, rhoubarb, and scamony.

This desease being indisputably inflamatory requires the necessary remedies of inflamation though Dr. Thelson says we must ever bear in mind that our patients are children, and for the most part weakly and scrofulous; their time of life and presence of strumous diathesis both forbid the strenuous appliance of antiphlogistic remedies which might be proper and ne-

cessary in inflamatory cases of adults of strong and healthy frames.

Whereas Dr. Gregory says the indispensable necessity of blood letting and other active measures in this desease I can hardly express myself too strongly. The true measures necessary for blood letting in this case as well as other inflamations, is evidently shown by the effects produced at the time.

The first bleeding should be copious such a one as would make a decided impression on the system — by adopting such a course in the early or approximating stage, generally breaks the violence of the desease much sooner than by small and frequent bleedings.

No general rule can be adopted with regard to the amount of blood to be taken, in every case we must be governed by our judgment of the appearence, habit and disposition of our patient.

The next step to be taken of most importance

is the administration of purgatives, calomel and jalap or scammony combined is our main dependance, exhibited with the indication to clear the alimentary canal of its morbid contents and correct the vitiated secretions and to relieve the engorged cerebral arteries. the best form to effect this purpose is calomel and jalap.

Sometimes the stomach is so irritable that it will reject all forms of medicine, when such is the case, and not corrected by a previous bleeding it would be advisable to give injections to allay the irritability of the stomach and to procure the necessary evacuations. In all dropsies the compound jalap powder should never be neglected if we are to credit the account given of its effects by Doctor Eberle in his Materia Medica.

In promoting the absorbent system, our chief object in affecting that purpose is

calomel in small, frequent and repeated doses, together with the mercurial unction; this shows its influence upon the system by affecting the bowels.

With regard to the beneficial effects of cold in acute hydrocephalus, no one doubts, if there is much heat, and after sufficient evacuations. The evaporating lotions of ether and cold water and spirits are of essential service — repeating as often as the linen gets warm. The influence of cold applied in this mode with the head elevated, at the same time the feet immersed in warm water, renders the patient more comfortable if not more safe. Blisters may be beneficially applied in the advanced stage, but never in the first stage of the disease; they may be applied to the nape of the neck or scalp, and may be applied in succession or may be kept open by irritating unguents. These are the chief and main remedies in which we

can rely in acute hydrocephalus.

In the premonitory stage, bleeding, purging and application of cold are the chief indications, mercury and blisters sometimes narcotics are of more efficacy than the first, in the advanced stage. With regard to diuretics such as digitalis, colchicum, squills, antimony &c are of service sometimes, but bear no specific relation in controling the desease.

The morbid appearances of acute hydrocephalus, on dissection appear to be characterized by a softening of the central portion of the brain, with watery effusion in the ventricles, in the substance of the brain is frequently found scrofulous tubercles. Induration and softening of the substance of the brain, adhesion and distention of the veins always present, excepting when the patient dies in the first stage of the desease.

There is much said by different writers in relation to the morbid appearances

of the different viscera, especially of the abdo-
-men and stomach. Indeed it would be vain
to say that any organ or viscus in the human
body is not liable to tubercular deposit in
such cases; the lungs, liver and very com-
-monly the serous membranes of the thorax
and abdomen are invested with these mi-
-nute tubercles.

An

Inaugural Dissertation

on

Stricture,

Submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland,

for the degree

of

Doctor of Medicine,

by

N. B. Ward.

I have chosen for the subject of my Thesis, Stricture of the male urethra. To the surgeon, no malady to which man is liable can be of greater importance. It is a disease with which he should be careful to be intimately acquainted, both as regards its correct diagnosis and its most prompt and approved treatment.

A case may arise, and such cases often do arise in the experience of practical surgeons, which shall demand immediate relief. The agony of the sufferer extreme, the danger, justly apprehended, immediate. The proper remedy must be at once adopted and plied with a skillful hand. And in order to the choice of the right ~~re~~ remedy and the skillful and successful application of it the surgeon, in whom the afflicted one reposes confidence, must be thoroughly acquainted with the mode

of distinguishing the disease from all others with which it may be confounded. The consumption of an hour, for the purpose of consultation with a medical brother, or the examination of his books, might subject the surgeon to the accusation of having been the cause of the death of a fellow being. In addition to this, and what, sometimes, it may be, gives him greatest concern, his reputation would take the wings of the morning and leave him with naught save his title.

I may have occasion, as I proceed in the discussion of my subject, to describe the kind of case which I have said so often arises, requiring at the hands of the surgeon forthwith action. To my mind, the first question proper to be put and answered in the consideration of any morbid condition, or structural alteration, is, in what does it consist? what is its essence? - Stricture proper consists in the partial or complete obstruction of the urethra - that obstruction having its origin in the urethra, and independent of the

agency of any foreign substance. I will next mention the division which authors make of stricture, viz. that which is permanent, and that which is spasmodic. And this division seems to be not only well founded, but necessary, materially influencing, as it does, the treatment.

There are many important lessons in the pathology of diseases of which we would to this day have been ignorant had morbid anatomy been neglected. But, to the praise of our profession, that important branch of it, of late, especially, has been cultivated with a perseverance and energy commensurate with the great good we have already derived, and may still expect to derive, from it. It is only, however, from observation of what happens in the living body that we are enabled to make the above distinction — for here, morbid anatomy would afford us but an imperfect lesson.

Suppose a man to have suffered at times from retention of urine, the result of stricture purely spasmodic, what would we find upon a post-mortem examination to account for what we had observed

during life? – Nothing whatever. How, then, do we come to a knowledge of the fact, that we have a stricture of the urethra, and that it is purely spasmodic? –

When we find a patient at one time evacuating his bladder with natural facility, the stream being as large and free as it ever was – while, at another, he cannot rid it of its contents at all, or, if he can, with the greatest difficulty, and this change occurring frequently. When, by the proper tests, we discover, too, that the obstruction is in the urethra itself, and in the anterior part of the membranous portion, and that it is independent of any foreign substance blocking up the canal. And when, with all this is combined a knowledge of the truth that ~~the~~ surrounding the membranous portion of the urethra are muscles, and that, like muscles every where else, they are endowed with the faculty of contractility, to what conclusion are we brought? – Surely, that it is all the result of spasm in these little muscles to which we have alluded. We know that stricture

, purely spasmodic, is rare, being combined, usually, with some degree of thickening of the mucous membrane lining the canal, and, of course, diminishing its diameter. Here an autopsy would afford information relative to the permanency of the partial obstruction, but none, except negatively, as to the reason of those occasional sudden and complete obstructions, which cannot be otherwise than spasmodic. —

First, then, the causes and symptoms of spasmodic stricture of the urethra. We have alluded to the fact that this variety of the disease has its seat invariably in the membranous portion of the urethra, for the reason that here it is surrounded by a sort of sphincter muscle, which is, in truth, the real seat of the spasm. In the anterior part of the canal there are no muscular fibres in contact with it, and hence we never have in this region obstruction of the kind of which we are now speaking. —

As might be supposed, repeated attacks

of spasmodic contraction, attended with violent efforts and straining to evacuate the contents of the bladder, often lay the foundation of a permanent thickening of the mucous membrane. And, on the other hand, we know that what was from the first permanent stricture of the membranous portion of the urethra is always more or less liable to be affected with spasm. Hence the truth of the remark before made, that a purely spasmodic stricture is of rare occurrence — and so, also, is purely permanent stricture having its seat in the membranous part of the canal. —

Both varieties of this disease are more frequently met with in the middle period of life than in infancy or old age, though neither the young child nor the old man is altogether exempt from it. The reason of its greater frequency after puberty, and between that period of life and old age will appear, we think, from a consideration of the nature of the causes which give rise to it —

As to the causes of spasmodic stricture —
In the first place we have, from what has been already said, that it is apt to affect persons who are labouring under some degree of permanent stricture. Frequent attacks of gonorrhœa may, also, give rise to it. Probably, however, the surgeon would be more correct did he ascribe it, in many instances, to the use of irritating injections administered on account of that disease, rather than to the operation of the disease itself. Alterations in the quality of the urine, so as to make it a source of irritation to the parts with which it comes in contact, may, no doubt, lay the foundation of this disease. So we find that, when the urine is habitually overloaded with the lithate of ammonia, or deposites the lithic acid sand — when it is alkaline, and crystals of triple phosphate of ammonia and magnesia are precipitated, if the patient be in any way predisposed, he is apt to have an attack. Exposure to cold or wet, indulgence in punch, champaigne or other acid liquors may produce it. Hence, says

Drewitt, an attack of spasmodic stricture generally comes on about four hours after dinner. — Such are some of the causes. We will now endeavour to describe the symptoms — in doing which we shall be obliged to ~~recapitulate~~ recapitulate part of what we have already said —

In the first place, the patient finds himself suddenly unable to evacuate his bladder. His straining efforts to do so may be even so great — every muscle that can lend the slightest assistance may be whipped into action — and all his energies, and all his powers concentrated and plied to effect a triumph over the apparently capricious resolve of that little bundle of muscular fibres which we have called the sphincter of the urethra, but all to no purpose. The case begins to assume a more serious aspect. In the region of the bladder great uneasiness is felt. The whole of the abdominal muscles instinctively endeavour to relieve the organ of its contents. The efforts to do so are no longer voluntary, but compulsive and constant. The bladder becomes distended, and can

he felt greatly enlarged and hard above the pubes, like a tense round tumour. The heart sympathizes with the local irritation; the pulse becomes hard and frequent; the skin hot; and the tongue covered with a white fur. The kidneys continue secreting, the bladder becomes more and more distended, and, if relief be not afforded, is presently ruptured. In the event of this, the urine escapes into the cellular membrane and into the cavity of the peritoneum producing, in all likelihood, speedy death. Or the urethra itself may be ruptured behind the stricture, giving rise to an extravasation of urine in the perinaeum and scrotum; which, to say the least, is extremely dangerous. Here, then, is one of those cases which we partially promised to describe, and which, too, would be of not infrequent occurrence were it not for the assistance rendered by the skillful surgeon. —

Twice have we said that a stricture purely permanent or purely spasmodic is comparatively rare. In the more common series of cases, therefore, the obstruction at first is only partial — the

urine being voided in a diminished stream and the diminution gradually increasing. By and by there is a complete retention, which subsides spontaneously or is relieved by art. After an interval of weeks, or months, or even years there may be another, and so on — the intervals growing shorter and shorter. All this time the stream of urine may be growing smaller, until reduced to a mere thread, or dribble indicating that the bladder is loaded, which may be confirmed by an examination of the hypogastric region of the abdomen. —

We come now to speak of the variety denominated, permanent stricture. The causes of this are much the same as those that give rise to the spasmodic form. Repeated gonorrhoea, producing inflammation of the lining membrane, thickening of the same, and, of course, narrowing of the calibre of the canal, is by far the most frequent. Sometimes it is situated in the membranous portion of the urethra where it is frequently induced by repeated attacks of spasmodic stricture — or, being itself primary,

may in its turn excite spasm. Very often, however, its seat is in the anterior part, or at the orifice, and is easily ascertained. This variety of the disease, no matter whereabouts found in the canal, or what the cause may be, is essentially chronic inflammation of the mucous membrane, and thickening thereof, as its effect. Such stricture is generally rigid and unyielding. The symptoms are as follow, The stricture is slow in its progress; the diminution in the stream of urine, in some instances, is not noticed until the patient is absolutely forced to strain in voiding it. Before, however, this occurs the patient may perceive that he wants to make water oftener than usual, and that he has a more or less uneasy sensation after doing so; he also notices that a few drops of the urine hang in the urethra and dribble from it after he has buttoned up. During all this time the stream of urine not only becomes smaller, but altered in its shape — twisted, forked, scattered, flattened. At last it comes to be a mere thread, requiring for its

evacuation great effort and straining. Bloody discharge is not an unfrequent concomitant. —

Such are the symptoms that will inform you almost to a certainty that permanent stricture of the urethra exists. It may be well here to allude to some of the consequences of stricture, when neglected or mattreated. We have before spoken of rupture of the bladder and remarked that it is invariably fatal. The same accident to the urethra, behind the stricture, has also been noticed, and this, if not promptly met, will either result fatally, or else produce an abscess in the perineum — which abscess will terminate in a fistula communicating with the urethra and thus forming a new outlet for the urine. This will afford an opportunity which the surgeon should avail himself for the dilatation of the stricture, afterwards adopting means to obliterate the false passage.

The relation which exists between the urethra and prostate gland and bladder is intimate, and, therefore, in long-standing cases of stricture, we

may expect these organs to suffer, which they do. Frequently, certain changes take place in many of the organs of the human body, at different periods of life, each organ, as a general thing, being subject to its own peculiar alterations. There are some which occur in the earlier periods & which seem to be indispensable to the enjoyment of life, as without them man would not only be unhappy, but soon cease to be at all. As old age advances we have others that tell their own tale and cause their own suffering. I need not specify, for this, if read at all, will be read by those who full well know what they are. — In old age a change takes place in one organ, the prostate gland, which it seems necessary to allude to. It becomes enlarged and may give rise to very nearly the same symptoms and produce some of the same results as stricture itself, with which it is many times confounded. The means of distinguishing between them may be mentioned hereafter. The two often exist together, in which case enlargement of the prostate is frequently

the result of, or facilitated by, the presence of stricture.

The disease of which this thesis professes to treat may cause other morbid conditions of this gland, of which we need hardly speak. In many cases of stricture of the urethra the bladder is rendered irritable, in consequence of which the urine is not allowed to remain long enough to dilate it — it, therefore, becomes small and contracted. Instead of this the bladder may be rendered more capacious than natural, as another result of strictured urethra; this is known by incontinence of urine. Large accumulations, of course, give rise to this condition, which more frequently exists in those cases where stricture is combined with enlargement of the prostrate. — Where this disease has long been neglected, sub-acute or chronic inflammation of the mucous membrane of the bladder often results. This inflammation extends along the course of the ureters to the membrane lining the infundibula and pelvis

of the kidneys, and subsequently disease and disorganization of the parenchyma of these organs themselves take place. In these cases the general health soon begins to suffer from constant irritation and want of sleep. The patient becomes weak; loses his appetite and his flesh; is subject to sudden chills and flushes. Uneasy sensations in the loins are complained of, and the urine deposites a great abundance of thick mucus.-

If the flow of urine from the bladder be impeded, its passage into it is, of course, interfered with. The effect of this is dilatation of the ureters and of the basins and tubes in the kidneys, the glandular structure of which becomes absorbed, and the whole ureters, pelvis, infundibulae, and kidneys become converted into one membranous bag or subsidiary receptacle for the urine. The urine, consequently, soon ceases to be secreted, its urea remaining in the blood and acting as a poison upon the brain produces coma, and the unfortunate patient is only relieved of his sufferings by death. Such are some of the

consequences of stricture. We now propose to speak, very briefly, indeed, of the diagnosis.

Our patient has symptoms, and these have been laid down, which lead us to suspect stricture in some part of the urethra. We may be mistaken. The prostate may be enlarged, a calculus formed in the kidney or bladder may be lodged in the urethra, other conditions may give rise to some of the same symptoms. How, then, are we to decide? - First, by a correct history of the case, a survey of the diseases to which our patient has been subject, manner of living, time of life &c. Secondly, by an examination per rectum which will detect an enlargement of the prostate gland if any exist - Lastly, and above all, by means of the bougie, or some other instrument corresponding to it. —

Now we will make an effort to say something of the plans of treatment which the surgeon should adopt when called to a case of stricture. The treatment proper may be divided into that which has for its object relief to the

patient when circumstances demand promptness, and that, the object of which is, to afford permanent cure. We will give our attention, first, to the spasmodic variety. And here, many times, the surgeon is not called in until, in consequence of the stricture, the bladder is painfully distended, and the patient in a state of immediate danger. This, then, would demand his first attention. No time, now, to pause, to deliberate, or to consult friends or books. The greatest possible anxiety & alarm call for promptitude of action. The bladder must be relieved of its contents, and that at once. What an emergency to test the knowledge and skill of the surgeon! — and if ignorant, methinks, to sink down to the very centre of the earth would be to him a grateful release. —

It must be borne in mind that the stricture here is at the membranous portion of the urethra, for treatment now concerns the spasmodic variety. Some have advised that the patient should first be bled and

then put into a warm bath — and these means used to such an extent and in such a manner as to increase their antispasmodic effect. Opium, too, has been recommended with the same intent, and, no doubt, these remedies properly employed may sometimes have the effect of overcoming the spasm, and thereby affording relief to the sufferer. Bleeding from the arm is, however, according to Brodie, rarely required in stricture of the urethra; but in some instances, says he, even where other means have failed, taking blood from the perinaeum by cupping gives immediate relief. Purgatives have, also, been recommended; but many cases will not admit of the delay necessary to the operation of even the speediest of this class of remedies. In such cases, therefore, they will not answer — it would be dangerous thus to trifle away precious moments.

Men of greatest experience, after all, go in for deferring all these remedies until the trial of the catheter has proved un-

successful, and then, and then ~~the~~ only to employ them. How often is it, that in examining the labours of some men, we appear to become, as it were, intimately acquainted with them, and to form for them the very strongest attachment. We might mention the labours of Latham, Watson, Gooch as, in our opinion, of a character to make just such impressions. But the works of no man more than Brodie are calculated to have this effect. They excite, in the mind of him who peruses them, the profoundest veneration for their author, and the utmost reliance upon every word he utters. —

This order of treatment is, first, the catheter — this failing, then the other remedies already mentioned. And should even these ~~fail~~ be unsuccessful, the only alternative left, is puncturation, either of the bladder, or of the urethra behind the stricture. There are three situations in which, anatomists tell us, we may at times puncture the bladder without danger of wounding the peritoneum. The circumstances of the

particular case must determine the choice of situation. Though the return is thought, in most instances, to be the safest operation. —

Now, having relieved the patient of his first attack of spasmodic stricture, how is his ~~last~~ liability to a return of it to be destroyed? The constitution of the patient, his general appearance as to plethora or anaemia must be surveyed; his habits of life; diet; the condition of his stomach, kidneys; quality of urine; state of bladder &c. All these things and parts must be carefully and knowingly scrutinized and rectified. We have said as much under this head as we have time, and must now proceed to speak of stricture when permanent — this accomplished, and we have done.

Here, too, the surgeon may not be called in until the stricture has become nearly or quite complete. By the careful employment of the bougie the stricture must, if possible, be dilated. This is

generally an easy thing when it is situated any where near the orifice of the urethra or in front of the bulb; but not so, if in the membranous portion, for obvious reasons. It is sometimes necessary to make trial after trial, and then be disappointed. After the trial of bougies of various kinds and sizes (always remembering to be very gentle in the use of them) without success, resort must be had to the catheter — first, to the gum elastic armed with the stilet, and then, if this fail, to the metallic or silver instrument. Should we again fail with this, division of the stricture has been recommended. As a dernier resort, an incision into the perinaeum so as to expose the whole of the contracted portion of the urethra should be made, and division of the stricture with a knife. Afterwards, of course, a gum catheter must be introduced into the bladder, allowing the wound to heal over it. As to a permanent cure of this variety, there is little else to be done than, when the stricture is

once dilated, to keep it so — and this may be accomplished by the constant employment of the bougie or catheter. There is rarely a necessity to resort to any means, other than mechanical, in the treatment of truly permanent stricture. If necessary, they will always suggest themselves to the surgeon of any sagacity. —

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An
Inaugural Dissertation
on
Purpura Hemorrhagica
Submitted to the examination
of the
Board, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
Elisha J. Cook

The subject of hemorrhage has engaged the attention of medical men from the days of Hypocrates down to the present, and from its importance as a disease will still be looked upon with increasing interest by the physician and surgeon.

There are various names given to hemorrhage as occurring in the human body according to their nature and seat, and of which it is not my present design to describe. That form of hemorrhage called purpura hemorrhagica will form the subject of this dissertation. This disease appears to have been recognised by several of the older authors; thus Hypocrates describes a species of disease of the spleen with fetid odour of the mouth, swelling of the gums, and large bleeding ulcers of the legs which seems rather to be scurvey than purpura. Celsus repeats this passage almost literally and makes further mention of hemorrhages not only proceeding from all the principle orifices of the body but even through all the pores of the skin. Paverius had distinguished purpura from petechiae which are observed in malignant fevers long

before Willdof devoted ~~[illegible]~~ some lines to the discript-
-ion of this disease in the celebrated Nuremburg Colle-
ction.

Graff published in 1775 the first inaugural dissertation
on this affection, the history of which, has since been
rendered more complete by the researches of Behrens
and others

In reviewing the history of this disease, we find the dise-
ases in which blood is deposited on the surface of the skin,
within its substance, or in the cellular membrane un-
derneath it, have received different denominations,
according as the extravasations are local or general.
M. Rayer, in his admirable work on diseases of the skin
remarks, "I comprehend under the general name ~~[illegible]~~
-purpura, several diseases whose common, and generic
character is to manifest themselves internally by hem-
-orrhage; and externally ~~[illegible]~~ surface of the body by petechiae
or ecchymoses independently ~~of~~ outward violence."
This group may be looked upon as having ten species
distinct from each other in their progress, and sym-
-ptoms, associated with the common hemorrhagic phen-
-omena which characterize them; viz Purpura simplex,

and purpura febrilis; purpura sine febre it self comprehends three varieties; viz purpura simplex, purpura urticans, purpura hemorrhagica, to which are added several sub-varieties.

Purpura Hemorrhagica is that variety of which he shall endeavour to treat of in this dissertation.

This is comparatively a rare disease, and perhaps on that account, together with its threatening symptoms, that have attracted the attention of almost every medical practitioner who has seen the disease.

Symptoms. – This singular affection is sometimes, and in fact, in the majority of cases, preceded for some days by great lassitude, faintness, and pains in the limbs, which render the patient incapable of exertion to any extent, but in some cases the attack is sudden upon persons apparently in good health.

After these premonitory symptoms, a peculiar efflorescence of the skin called petechiae, often make their appearance of a large size, and are interspersed with bilices and ecchymoses, or livid stripes and patches, resembling the marks left by a whip or vio

-lent bruises. M Rayer remarks that in the majority of ca-
-ses, the ecchymoses appear before the petechiae, the body
being covered with these livid spots; they commonly make
their appearance first on the legs, and at uncertain
periods afterwards on the thighs, arms, and trunk of
the body, the hands being more rarely spotted with
them, and the face generally free.
They are (according to Bateman's description of them) of a
a bright red colour when they first make their appe-
-arence, but soon become purple or livid, and when
about to disappear they change to a brown, or yellow-
ish hue, so that as new eruptions arise, ~~and~~ the ab-
-sorption of the old ones slowly proceeds, this variety of
colour is commonly in the different spots at the same
time, the spots in some cases, are slightly rough, the cuti-
cle has been raised into a sort of vesicle containing
black blood; this more frequently happens in the spots
which appear on the tongue, gums, palate, and inside
of the cheeks, and lips, the cuticle being extremely
thin, and breaks from the slightest pressure. ~~And~~
Purpura seems evidently to be hemorrhagic in its nature
the same state of habit, which gives rise to the effusions

under the cuticle, producing likewise copious discharges of blood from internal parts which are protected by more delicate structures.

M. Rayer remarks that the essential feature of purpura hemorrhagica, consists in the hemorrhage from the viscera or internal parts which invariably precedes, or accompanies or follows, the ecchymoses or effusions of blood into the skin, or sub-cutaneous cellular membrane.

The disease is almost always attended with extensive intestinal hemorrhage, hematemesis, haematuria, and very often in females, with menstrorrhagia: it is generally accompanied by great debility and depression of mind, the pulse feeble, and in some cases quick, together with heat, flushing, perspiration, and other symptoms of slight febrile irritation; patients some times experience deep seated pains felt about the precordia, and in the chest, loins and abdomen, tenderness of the epigastrium on pressure, constipated state of the bowels; very often a copious secretion of saliva; when the disease has lasted for some time the patients

becomes sallow or of a dirty complexion and much emaciated, some degree of odema appears in the lower extremities, which afterwards extend to other parts.

From a review of the general symptoms, it will be perceived that the general characters of the disease, which are very startling, are modified by the local symptoms, and they vary according as the hemorrhage occurs from organs of greater or less ~~extent~~ relative importance in the economy, also the amount of blood lost, its repeated occurence at distant intervals, or as the hemorrhage takes place from one points in succession, or from several simultaneously—

Causes of Purpura.— Bateman, Bayer, and a number of other minute observers who have paid attention to this disease, and upon whom the utmost reliance may be placed, have arrived at this conclusion, that the causes of this disease are by no means clearly ascertained nor its pathology well understood; the disease sometimes occurs in individuals who are strong enjoying good health apparently,

breathing a pure atmosphere, with all the necessaries of life around them; it more frequently attacks persons of a debilitated constitution, living in crowded situations, on poor diet and subject to distress of mind; it has been premised and we are inclined to think correctly, that persons of a strumous diathesis have a greater predisposition to take on the disease, than those of a different habit; from the fact that this diathesis is favourable not only to that form of hemorrhage under consideration but to many other forms,

Dr. Cettauer of Virginia in a paper on this disease published in the American Journal of the Medical Sciences April No 1846, remarks, that according to his experience with this disease, the majority of cases that have come under his care, were strongly tinctured with the strumous diathesis, he further states that of sixteen cases that he had seen, fourteen were decidedly scrofulous, while the remaining two not absolutely free from this appearence, this gentleman is disposed from observation, to refer pure-pura to a constitutional origin connected with the

scrofulous susceptability, derived originally in most cases from the parents

Pathology. –

This part of the subject must be considered as being very obscure, though enough has been ascertained to show that whatever tends to depress the energy of the blood-making organs predisposes to this disease. This is according to the language of Dr. Watson emphatically a blood disease, the blotches formed on the surface of the body may be attributed to the passive character of the hemorhage, different from that which may be produced by plethora in the vessels, or openings through which the healthy exhalation pass; the change is considered as being of the nature of morbid debility or relaxation; that such may be the case is not impossible nor even unlikely: this hypothesis derives additional support from the efficacy of astringents, in acting in some way greatly to the amelioration of the disease.

This relaxation affects the vessels together with the evident ~~alteration~~ alteration in the consistence of

the blood itself, which thus may easily pass through channels that under ordinary circumstances would be impossible: now it is well known that hemorrhages very often occur when the blood is more thin, pale, and serous than common, and still more remarkably when that fluid has undergone some chemical change in its character, which is certainly the case, according to recent researches on the blood, this doctrine is further established by the fact, that whatever tends to repair the blood generally effects a cure. That the state of the blood, as respects the proportion of its fibrinous constituent, being concerned in the production of purpura, seems to be admitted by the best pathologists.

Andral is of this opinion that the fibrine of the blood is reduced below its normal proportion in every case; whatever may be the explanation in regard to the pathology of purpura, there cannot be a doubt but that the state of the vessels and blood must certainly be concerned in the production of the appearances in every case

Appearances on dissection. — Petechial marks have been seen on the surface of all the internal organs, vascular turgescence; sanguineous and serous effusions in the head, the lungs in some cases diseased, congested, the air passages filled with bloody effusion, the mucous membrane lining the tubes of a dark colour;

In the abdomen the mucous membrane of the stomach and bowels, vascular and spotted with petechiæ, the liver tender and gorged — these spots have been seen on the right ventricle of the heart, spleen sometimes enlarged and softer than usual possessing a quantity of dark coloured ~~blood~~ matter of a semi-fluid consistence — the kidneys frequently contain effusions of blood under the internal membrane lining its pelvis.

The cutaneous and sub-cutaneous ecchymoses and petechiæ neither increase nor decrease at the moment of dissolution, the petechiæ and ecchymoses appear not to be similarly situated, some are very superficial, others occupy the internal areolar of the dermis. the blood appears to be coagulated in the largest and blackest, and fluid in the

smaller ones, the blood is easily removed by wash=ing or maceration,

Diagnosis.— Purpura Hemorhagica is not likely to be confounded with other diseases which may present externally similar appearances in the cutaneous and sub-cutaneous cellular tissue, We may have in some cases of fracture of a limb ecchymoses or petechiae, also on the extremities of the lower limbs from standing for a long time in consequence of mechanical obstacle to the return of the blood, these cases may be very easily dist=inguished

In typhoid fever we have very frequently a form of purpura manifesting itself by petechiae or rose coloured spots, these spots are said to be obliterated by pressure of the finger but return when it is removed, the petechiae of purpura undergo no change of colour under the pressure of the finger, in typhoid fever we generally have the petechiae on the abdomen preceded or followed by implication of ~~disorder~~ of the principle functions in the economy

In yellow fever as in purpura, there is very fre=quently spontaneous hemorrhage, black or bloody stools, vomiting of dark grumous matter, sang=uinous infiltration into the muscles, the cellular substance under the skin, but yellow fever differs widely from purpura in its cause; and the symptoms, of which profuse hemorrhage is never one of the most alarming

Prognosis. — Purpura Hemorrhagica from the se=verity of its symptoms viz. the hemorrhage that takes place from the mucous membranes lining the different cavities often to an alarming extent, may be looked upon as being in the majority of cases a very serious disease,

The prognosis will depend much upon the patient attacked, and the amount of hemorrhage — if the patient has a pretty good constitution not being tainted with the strumous diatheses, the pe=techiae few in number, and the hemorrhage moderate in quantity with the pulse not greatly accelerated, we may look upon the disease favor=ably, but when the patient is debilitated

by previous disease; and the petechiae numerous accompanied with copious hemorhage from the lungs, abdomen and bladder - continuing for some time with the pulse greatly accelerated, we will be compelled to regard the disease as a fatal one

Treatment. - Under the obscurity which at present involves the nature and seat of purpura hemorhagica, we feel rather under an imbarrasment in entering upon this part of the subject from the various views entertained by authors ~~on~~

Drs Parry, McIntosh, Gardner, and a number of others have from certain notions supported blood-letting, while it has been condemned by some practitioners of equal notoriety, Drs Willan, and Rayer are among those who recommend a generous diet the use of wine, peruvian bark, and acids, whatever may be the views of the above named gentlemen in regard to the pathology of purpura, it certainly does appear evident, that when the disease attacks the plethoric, the symptoms will very often be of an acute character

attended with some fever a strong pulse — strong as well as excited pulse; there can not be a doubt in the propriety of blood letting (as would be indicated in a case of idiopathic hemorrhage accompanied with excited action of the vascular system) as being calculated to abate the vigour and force of the heart's action and to lessen the general plethora. The repetition of blood-letting must of course be regulated by the circumstances of the case.

We are not to suppose that all cases of purpura bear this sthenic character or require this remedy; but it often happens that this disease occurs (and he may say in the majority of cases) in patients who are debilitated brought on by exposure to the various causes, of which are evidently a disturbed sanguification and nutrition perhaps playing an important part in the production of purpura - in patients of this character blood-letting must certainly be impractible. In the treatment of this disease he must be gui

=ded by the previous circumstances and habit of the patient, by the pulse and other symptoms which accompany the purple spots

Whatever may be the discrepancy of opinion in regard to blood letting in purpura, there is one point however on which almost all practitioners agree, the great advantage of keeping up a free discharge from the bowels as being peculiarly adapt=ed to the treatment of this disease, we should endeavour to address our remedies to the digestive apparatus as speedily as possible, their immed=iate action being on the state of the blood and organism from which the disease proceeds. This may be accomplished by the administration of small doses of Calomel in combination with aloes rhubarb or jalap - this compound will be found to have a good effect in the majority of cases well calculated to correct the secretions of the digestive system in general, at the same time procuring copious stools - early after its action the tongue often assumes a more healthy app=earance, and to an arrest or abatement of the

hemorhage - The late Dr. Whitelock Nicholl and others have spoken of turpentine given in moderate doses as being highly efficacious in purpura, in conjunction with Cathartics. Great benefit may be often derived from the administration of the acids - the elixir vitriol in doses of few drops three times a day will be found highly efficacious. astringents in general are highly usefull in this disease, some of which have been held in high repute viz. Rhatany and Many other articles of this class, but of all the astringents the acetate of lead enjoys a higher character than any other in checking hemorhage in general - and will be found highly usefull in this disease combined with a small proportion of opiceus

The following case of purpura occured in the practice of my preceptor Dr. W. Bartholow of Md the history of which will be found as follows,

March 3rd 1846 - Was called to see Emeline aged eleven - a bright mulatto of good constitution, has usually enjoyed good health with the exception of a severe attack of Whooping Cough

from which she has entirely recovered, found the skin perfectly covered with petechiae of a dark brown and in some places almost of a black colour, varying in size from a pins head to a five cent piece, the tongue, gums and fauces as far back as can be seen are covered with these spots and vibices, constant ozing of blood and saliva from the mouth, tongue furred br=ownish in the middle with considerable redness of the tip and edges, urine grumous and deposits upon standing large coagula of bl=ood, the feces are dotted and streaked with that fluid, has had several attacks of epistax=is, complains of pain in the back and limbs, pulse 120 soft, skin hotter than natural and dry, slight cough and expectoration of mucous which is streaked with blood, respiration acce=lerated - appetite bad; great desire for cold drinks, has had several slight discharges from the bowels within the last two or three days but no free evacuations for some time.

Ordered her Calomel and Jalap āā x grs

to be followed by a dose of Castor oil if it does not operate freely –

March 4th – Medicine has procured ~~several~~ several stools of the colour and consistance of tar – general appearence pretty much the same as yesterday, ordered her one of the following pills every three hours ℞ Plumb Acet grs viij Pulv Ipecac Pulv opii āā ʒ ss Ext hyoscy and a dose of Castor oil after taking the last pill.

5th Cathartic has opperated several times, stools not quite so dark as before but extremely offensive, Petechiae are fading – urine still grumous – Pulse 100 – slight fever – ozing of blood from the mouth still continues – ordered the same prescription as yesterday with decoction of oak bark to be used as a gargle,

6th Petechiae are disappearing – urine less grumous – stools more natural – pulse 90 – temperature of the skin natural – free from pain – has some appetite – but little thirst – secretion of saliva more natural and free from blood ordered 10 drops Elixir Vitriol three times a

day - chicken broth for nourishment

8th Still improving, examined the body careful and found but few of the purple spots remain-ing - urine clear and limpid - secretion of sa-liva natural - pulse 80 appetite good - continue the acid - ordered cathartic at bed time,

10th Convalescent - from this time she improved rapidly and was soon in the enjoyment of her usual health, this is but a single case of pur-pura, with many of the symptoms well marked, and in describing it my design is to give the treatment (in my opinion) most likely to effect a cure in the majority of cases, if the symptoms are more severe of course the treatment will vary accordingly

An

Inaugural Dissertation

on

"Phthisis Pulmonalis."

Submitted to the examination of the Provost

Regents, and Faculty of Physic of the

University of Maryland:

for the degree of

Doctor of Medicine:

by

B. Rush Ridgely.

Any custom, not absurd in itself, which has existed for so many years and received the sanction of so large a number of individuals as has that of the writing of Theses was, it would seem, worthy of respect and imitation. Yet this particular custom appears, to me, to possess few claims to observance. If to ascertain the amount of information which the candidate possesses on the subject, is the object contemplated, it is next to useless. A person may be conversant with a subject, and yet because he is not in the habit of writing, or not able to express his ideas clearly, another, with not one half the information which he possesses, may write a better Thesis: besides, one has friends enough who are willing to assist him in his undertaking.

However, as it is my duty to write a Thesis, and not write against Thesis-writing, it may be necessary to make some remarks, in regard to this particular one. To say that this Thesis does not contain one original idea, is superfluous; because, from the nature of the subject it is impossible to be otherwise. I have endeavoured to collect from all the sources to which I had access,

the most important facts and results of observations, which have been published: and make a connected narrative of them — a difficult task by the way. I have not credited each idea to the author from which it was taken, because as the substance of every sentence was taken from information derived from some book; and, as I had forgotten, in many cases, in what particular book it was contained, it would have been almost an impossibility to have made all the acknowledgments. If therefore any one shall find ideas or sentences, herein, to which he has any claims of paternity, let him receive the acknowledgment contained in this Preface as sufficient. And that no one may give an undeserved credit, I will merely say to each, if you search sufficiently you will find all the ideas of which the following Essay are composed, in the works of some of the authors on Phthisis Pulmonalis — unless, indeed, from not having fully understood them, I shall be found to have propagated some heretical tenets.

Man has been the victim of disease, since the fall of Adam. From the time, when, the blow of the "Fratricide" sent to an untimely grave, the first victim of ungovernable passion, until the present, death has depopulated the face of the earth; and will continue to reign and triumph, so long as an immortal soul inhabits its mortal tenement. Time in his winged flight, each moment, adds to the number of his victims. No age, sex, or condition can escape from the tyranny of his domination.

The tender infant, who is just beginning to lisp those first words so ardently expected, and so fondly treasured up by its attendants, and who is becoming experimentally acquainted, with the materiality of surrounding objects — the maiden, who has painted for herself, with the colors of hope, a pathway strewn with flowers, and in whose expanding charms we discover the future solace and comfort of our existence — the young parent, in whom, the visionary fancies of the youth's enthusiasm, have been partially realized — the hale and robust man, in the prime of life, and enjoyment of all his faculties — and the valetudinarian, in the "lean and slippered pantaloon", whose allotted space of "three score years and ten", has dwindled down to the "shadow of a shade" — each and all must bow

in humble submission, to the fiat of this uncompromising despot.

He lays his cold and clammy hand on the Warrior, in the hour of victory — on the Monarch, on his throne, adorn his momentous counsels, and sustained by all the appliances of art — on the Father, in the private circle, surrounded by his attached and beloved family — on the Shepherd, among his flocks — and on the Laborer, in his cot — scattering confusion and misery along his pathway, and wringing many a noble heart.

"Pallida mors aequo pulsat pede pauperum tabernas,
Regumque turres."

Neither is any latitude, or climate, free from the visitations of disease. Go to the extreme north, where Boreas reigns supreme, and where Boreas, free from Aeolian control, swaps in rude blasts over interminable masses of eternal ice, where vegetation is unknown; or to the warm and sunny south, where Sol, with his vivifying countenance, enlivens the face of the earth and mantles it with perpetual verdure; where the balmy breeze, tinctured with a thousand fragrant odors, plays in fitful zephyrs, amid orange and acacia groves; or to the most favoured regions of the globe where the extreme frigidity of the former, and the extreme calorificity of the latter, are tempered into a happy mediocrity — to whom we will, ascend the healthy mountain top, descend into the pestilential

valley, navigate the trackless ocean, seek the depths of the mine and explore the forest — we will still discover, that:

"Morituri sumus omnes."

or to borrow the ampler and picturesque language of poesy.

"As winter stops the rivers flow
And sprends the face of earth with snow,
So Death congeals the living red,
And lays his white robe o'er the dead."

To the Pathologist, the Physiologist, and the Physician disease is alike interesting, and alike the harbinger of intelligence. To the Physiologist, because, it is only by an examination of the animal economy, in all its various phases, that accurate notions can be formed of the laws, which preside over its functions, and conduce to the maintenance of harmony among its component parts. The phenomena, exhibited by pricking the web of a frog's foot, (in producing irritation, and inflammation, in a structure, which is sufficiently transparent, to exhibit the effects of inflammation,) have, in the hands of the scientific Physiologist, furnished the basis of the most accurate theory of inflammation, which has ever been offered to the profession. To the Pathologist, and Physician, because, by the examination of numerous cases of disease, more accurate notions may be formed of the march, termination, and treatment of those which may occur in future.

The most trifling disease is worthy of serious attention, not only, because, it may tend to render less obscure, those which are more formidable in character, but also, because, it is, really, a source of danger per se; under some circumstances with which we are unacquainted. Causes the most insignificant, apparently, have been productive of disastrous consequences. Thus, the bite of a flea, is said to have occasioned a fatal case of tetanus; the same disease has been induced by a trivial cut or scratch about the hand; or by treading on a pin, or nail, or seal. Death has also been occasioned by excessive mental emotions, as sudden joy or fear, or the incautious announcement of intelligence; or by a fit of anger.

Disease derives great importance, also, from the part of the body, in which it is situated. A blister may be applied to the whole of the thorax, and an immense amount of inflammation excited, causing the removal of the cuticle, together with the effusion of serum, yet the patients' life is not endangered; a person may be severely scalded, over a large portion of his body, and yet recover. But, at the same time, acute inflammation of the larynx, to the extent of a square inch, with the effusion of but a small quantity of serum will place the life of the patient in the utmost jeopardy; while any lesion of continuity, in the alimentary canal, will, in nine cases out of ten, destroy the life

of the patient, almost as certainly as a musket ball through the heart. Again, the destruction of some parts of the body, will not interfere, materially, with the offices of life, while any impairment of the functions of others, will seriously inconvenience the patient. Thus, a man may live a number of years after one of his extremities, has been removed; but no disease could occur in his heart or lungs, without exciting apprehensions for his safety.

Of all parts of the body, none, perhaps, suffer more frequently, or are subject to diseases, which endanger life in so remarkable a degree, as the lungs. The change from venous, to arterial blood, occurs in the lungs. Prevent, in any manner, the passage of air into this important part of the animal economy, and the subject instantly dies asphyxiated. The cause of death, in persons who have been submersed; who have inhaled hydrogen or some other gases; or in whom, existed any impediment, to the ingress of air into the lungs, as in cynanche laryngeis, and tracheitis – is the non decarbonization of the blood. Any disease, then, which interferes with the passage, of the due proportion, of air, into and from the lungs, endan-gers the life of the patient: and it is this in part which renders Hydro-thorax, Pneumonia, and Pleurisy, diseases of the most fearful portent – but even these, with proper precautions, may be made to succumb, to the en-lightened treatment of the scientific practitioner. But besides these,

another presents itself, to our consideration, having its seat in the texture of the lungs - a disease of the utmost interest to the physician, because of its incurable nature; of the lesions which a post mortem exhibits; and of the class of subjects, which it hurries to the grave.

In no department of medicine, have such rapid strides been made, towards a perfect understanding of disease, as in Phthisis Pulmonalis. Modern research, and ingenuity, have, after the most patient scrutiny, into the nature, causes, and phenomena of some diseases, been compelled to abandon the attempt; and leave them in status quo; but not so, in Phthisis. The immortal discovery, of the method of exploring the chest, by means of the physical signs, by Laennec, in the present century, has led to a precision of knowledge in the various diseases of the lungs, for which that master spirit, Cullen, sighed in vain. We can now detect, the minutest changes which take place in the parenchyma, the minute air cells, the bronchi, and on the surface of the lungs. We can extract secrets guarded by bony walls, as easily, as though the parts were subject to ocular inspection.

Cullen, who has given us a most admirable description of this, (as well as of many other diseases; and to whom plan of treatment little can be advantageously added, was as ignorant, as a truckled urchin, of its pathology, and the physical signs, by which we are enabled to warn its victim of its approach. To the labours of Laennec

Louis, Andral, Forbes, Latham, Graves, Stokes and many others, both in this country and in Europe, posterity, to the latest times, will ever be indebted.

Phthisis has been divided into three forms — the acute, chronic, and latent. The former frequently manifests itself, in the course of other diseases, or at their termination, as scarlet fever, continued fever, measles, catarrh, or any attack which will break down the strength of the patient, and depress the powers of his system. It then advances with the strides of a giant, accompanied with acute malic fever, great and sudden emaciation, copious night sweats, and diarrhoea; and soon the grave closes over another victim. This form usually, however, occurs in young persons, in whom the scrofulous taint is conspicuous, and in whom tubercular disease, had been making silent progress before the acute affection was superadded.

Again; Phthisis may exist for years, and yet the patient continues to live. In fact, this is, perhaps, the most frequent form under which it manifests itself. In this form the symptoms come on gradually; rather late in life; and in persons, in whom the scrofulous cachexia, is obscurely marked. Altho they attend to the daily avocations of life, they gradually become thin, and pale; are the subjects of dyspnoea, dyspepsia, diarrhoea, and cough, which last becomes worse during the winter. When in this state, life is held by the most fragile

tenuin, and an attack of pneumonia, pleurisy, or catarrh, may place the patient beyond the cares and ills of life.

Again: Phthisis, is said, to be latent, when it occurs in the chronic form; but when, at the same time, its symptoms are obscured by the presence of some other disease, and when they are not very clearly marked in themselves. The most obvious of the symptoms may be absent and yet the disease may be steadily, yet stealthily advancing, with nothing to betoken its presence more certain, than some signs of ill health, and feebleness.

The duration of an attack of Phthisis, within certain limits, and in peculiar cases, is subject to considerable variations. Cases have been recorded, which have passed through all their stages, in the very short space of seventeen days, from the time at which the symptoms attracted attention; others in four or five weeks; while on the other hand, patients have lingered on for ten, twelve, and even as long, as forty-seven, and fifty-four years, manifesting all the ordinary symptoms of Phthisis Pulmonalis. Number of those, who unwittingly fall victims to this disease, might continue to live for years, in the enjoyment of comparatively good health, if (when the incipient signs of its approach manifest themselves, or, knowing, prone being the descendants of consumptives, the strong probability, which exists of their becoming attacked,) they would

betake themselves, to a more sunny and equable clime, and fortify their systems by all those prophylactic means, which have been found by experience, to conduce to the preservation of health. But these precautions not often being attended to, and perhaps, an almost opposite course being followed, the disease runs its course rapidly, and terminates fatally — its average duration being from six, to twelve months.

Statistical tables, in whatever country they have been prepared, agree, with considerable unanimity, in declaring that women, are more frequently the subjects of consumption, than men. According to Louis — than whom, no better statistical authority could be cited — "le nombre des phthisiques, chez les hommes, et chez les femmes, était comme 7 est à 9." In Dr James Clark's tables, the difference is not quite so well marked, but still the number of female deaths, considerably overbalances that of the males. Nor should we be prepared to encounter other results. When we consider, that the female is so much more delicate in structure; that she is doomed to an almost exclusively sedentary, and in-door, course of life; that, in early years, but little attention is paid to her physical education, and to exercise; that the style of her dress, which leaves bare the throat, and neck, to the visitations of the rudest blasts,

and which prevents the free and requisite motions of the chest; and the insufficient manner in which the feet are clad; and that these men, also are predisposed to the affection, resemble females in their bodily organization; we are prepared to receive statistics such as are above represented.

Another point, worthy of attention, is to ascertain the age at which Phthisis is most apt to attack the patient: statistical tables have been collated for this purpose, also. No age is free from its visitation; neither the infant, nor the centenary, nor those of any intermediate epoch. But it most commonly attacks the lively and promising of our race — those who are remarkable for a characteristic placidity of temper, and who discover talents, which render them the admiration of their acquaintances — the bud just expanding into the flower. Hippocrates informs us, that this disease occurs most frequently, between the ages of eighteen, and forty-five years: an opinion, which has been fully verified, by all more modern observers. The following table, from the work, of a physician, of a neighboring city, shows the relative mortality from earliest infancy, to an hundred years,

Under one year.	5.	From fifty years to sixty,	4.7.
From one year to ten,	8.	" sixty " " seventy,	2.4.

From ten years to eighteen,	14.	From seventy years to eighty,	8.
" eighteen " " thirty-five,	263.	" eighty " " ninety,	2.
" thirty-five " " forty,	73.	" ninety " " one hundred,	2.
" forty " " fifty,	78.		524.

According to this table, more persons die between the ages of eighteen, and thirty-five years than at all other ages combined. — And the following, drawn up by Louis, and Bayle, and quoted by every person, exhibit nearly analagous results. The former, is that of Louis; the latter, of Bayle.

From fifteen to twenty,	14.	From fifteen to twenty,	10.
" twenty " thirty,	39.	" twenty " thirty,	23.
" thirty " forty,	33.	" thirty " forty,	23.
" forty " fifty,	23.	" forty " fifty,	21.
" fifty " sixty,	12.	" fifty " sixty,	15.
" sixty to seventy,	5.	" sixty " seventy,	8.

Neither does it confine itself within any Geographical limits, but ranges the whole globe at pleasure attacking men, living in the most dissimilar manners, and situations. It may be found "basking in the sunshine of the tropics"; or "drawing its weary length along," amid the perpetual masses of ice, which surround the poles. But its principal habitat is within our own happy; and

delightful climate. It devastates England; the principal countries of Europe; and the most temperate parts of our own country, ranging extensively, from Boston, as far south as the gulph of Mexico. It, at the same time, manifests itself, more frequently in the Atlantic coast, than in the interior, at a similar degree of Latitude.

Perhaps one of the most interesting points connected with the subject of consumption, is whether its origin, and march, are interfered with by the occupations of the patient? Has it been ascertained, that persons, engaged in any employment are, caeteris paribus, more subject to be attacked by Phthisis, than an equal number, in some other line of business? It seems to be a pretty generally conceded fact, at the present day, that some trades are noted for the numbers which annually fall victims, to this disease. Those persons, whose mode of life exposes them, to an atmosphere, loaded with the particles of any substance, which we do not find in pure air, are especially liable, to become its subjects. Thus; it is a settled point, in England, that there are the grinders of metallic — and especially iron and steel — instruments; as well as stone-masons, miners, &c. It also appears, that those, whose duty

compels them to use wet stones entirely, live longer than those who grind on dry stones entirely; while those, who at times use dry, and at others wet, hold an intermediate position between the two extremes — this latter fact, proving that the particles of foreign matter, floating in the atmosphere, exist an influence in proportion to the amount present. And in this country, it has been noticed, that this unfortunate class, is well represented by persons engaged as tailors, cobblers, shoemakers, &c. These, also, whose occupations are sedentary, as literary men, and clerks, are more frequently its subjects than porters and seamen, and country men. Those persons employed in active, stirring employments, in a pure and salubrious atmosphere, not subject to too great variations in temperature, and moisture, are undoubtedly placed in the most favorable situations, to ward off the advances of this importunate master. Among such occupations, none combines the due proportions of exercise, and salubrious air, in such just and suitable proportions, with at the same time a sufficiency of mental employment, as that of the Agriculturist. "Who would not be an "American Farmer!"

Altho consumption, generally,

runs a regular course, when fully formed, yet certain circumstances exert a controlling influence over it; at one time accelerating, and at another retarding, its advance. If the individual dwell in a cold, and insalubrious climate, and especially during winter; and if, from the nature of the weather, he is compelled to remain within doors, for some time, without any exercise, the tone of the general system will decline, and the powers of life be enfeebled. The same thing will happen, if he is attacked with an acute inflammatory affection, or any other, which will confine him to his bed. Similar results would follow, if a consumptive person, living within the tropics, removes to a colder climate, and remains therein, during the winter months: whereas if he emigrate to a warmer, from a temperate climate, and observe all those hygienic, and prophylactic measures, taught by experience, the chances for a lengthened life, are greatly increased.

All depressing emotions are also, hurtful by impairing the general health. It has also been observed that pregnancy retards its march, but as this is merely a temporary cause, the effect is evanescent also: and the disease generally returns with renewed force after delivery, altho cases are recorded of women who have had a goodly share of children, in whom

the existence of consumption, was ~~undoubted~~ indubitable, upon their first conception.

As medicine is seldom victorious in an encounter with this disease, when fully formed; but since, by a resort to proper means, we can ward off its inception, it becomes a point of the utmost importance to be able to determine before its outset, who will suffer from its attack, if we allow it to pursue its course. That, in the vast majority of cases, the evidence to be derived from an examination of the bodily conformation, is sufficient to decide the question, is evident. It has generally been observed, that the future phthisical patient is remarkable for vivacity of countenance, and clearness of mind — as well as placidity of temper — in youth. A fair delicate complexion, a bright redness of the cheeks; and a tendency on the part of the countenance, to change its hues, with the passing emotions of the mind, constitute its peculiar features. The upper lip is large; the eyes are blue, and the white pearly; the hair is light, and fine; and the muscles unable to endure much exertion; the neck is long; the person slim; the chest narrow, and the shoulders drooping. The circulation of the blood is sluggish, and the various organs seem to

perform their offices, in an imperfect, and dilatory manner. It is not, however, confined exclusively, to persons exhibiting the foregoing marks of bodily conformation, but is seen at times in persons of dark complexions and sanguine temperaments; and is, sometimes, seen in muscular and robust subjects, and, even, in some of the most celebrated English pugilists. But still, persons, whose appearance agrees with the foregoing description, are most frequently its victims. When, therefore, such individuals present themselves to us, we should regard them distrustfully, and advise such a course of life, as should give them the greatest immunity from the formation of tubercles.

In no disease, perhaps, can the changes be so satisfactorily determined, by a post mortem examination, as in Phthisis Pulmonalis. In almost every organ of the body, specimens of the morbid anatomy, which characterizes it, are detected; but this is especially the case, in the lungs. This diseased product is called Tubercle; and may always be detected in some of its forms. Tubercles are found in several different stages: from that of incipiency, to maturation. In the simplest, and primary form, we observe the lungs to contain a

number of small specks of a matter, which is not dissolved in healthy lung of a yellowish, or greyish color, opaque and friable. These specks may be few, or so numerous as to fill up the lung, almost entirely; while the portions of lung intervening them, is indurated, to a greater or less extent. This is the stage of miliary granulation.

When these deposits have once obtained a resting place, they increase with amazing rapidity – in some cases, while in others more tardily – by accretions of analagous matter in successive external layers, until at last they are as large as a chesnut, or hen's egg, and of a whitish appearance, and of the consistence of cheese – when they are called crude tubercles.

After remaining in the crude state for an indefinite length of time, and giving rise to symptoms of greater or less obscurity, a process of softening commences, in some part of the mass, which continues until its consistence is reduced to that of pus. This is called the period of maturation or softening. The inflammation, in the tubercular mass, may light up a secondary inflammation in the surrounding portions of lung, which will determine a deposit of the specific matter in the part, and lay the

foundation, for a second crop of tubercles, which will mature at some distant day, if the first <u>suddenly</u> be not fatal. When the mass has broken down, it will be expectorated, by means of the bronchial tubes, which, having been severed during the progress of the disease, open into the mass. When the matter has been expectorated a cavity is the result.

Cavities or vomicae have been found of all sizes, from a pea, to an orange – or even an entire lobe, has been occupied, by one cavity – but the ordinary size is about, that of an egg. When of a very large size, it is extremely probable, that several small vomicae have been reduced to one, by the walls between themselves, having been perforated or broken down, by the inflammation, which softened the tubercular mass. When the cavities are first formed, the walls are extremely irregular, and ragged; but after some time, if there be no other tubercles in the neighborhood to interfere with the salutary operations of nature, they become firm, on account of the induration of the surrounding parenchyma – and the cavities themselves, are lined by false membranes, which perform the functions of secretion. They may contain air, or mucous, or pus, or blood, or remaining tubercular matter.

But now, when tubercles have been formed and have increased to some size, they do not necessarily soften, and caused vomicae. A hard, whitish, chalky substance, which, it has been determined, beyond all doubt, is the remains of former tubercles, has been discovered in the lungs of persons, who have died of diseases other than Phthisis. Sometimes these masses are as hard, as cartilage, or even bone itself; or one part may be of a cretaceous, while the other is of chalky consistence. These may remain in the lungs for years, without producing any unpleasant consequences. In fact, they seem to be produced, by a salutinary effort on the part of nature, tending towards a cure. I have, myself, seen and felt, six or eight of such masses, in a lung, which seemed in other respects healthy, or in which, tubercles, in their various stages, were abundantly manifest.

At other times, another appearance is observed, which is, in reality, a healing process. After the softened morbid matter has been expectorated, if the patient's life is not destroyed by this, or a successive crop of tubercles, the cavity is in part, or entirely obliterated, by the contraction and cicatrization of its parietes. This cicatrization is sometimes so perfect, as merely to leave a simple line, marking its presence; or a puckered, and wrinkled appearance of the parts, and depression & wrinkling of the pleura over it.

Altho tubercles are found, in the greatest abundance, and most advanced stages, in the lungs, yet the morbid anatomy peculiar to Phthisis, is by no means confined to these organs. Consumption is a great general disease, and implicates almost every organ of the body. That part, in which we find tubercles, in greatest abundance, next to the lungs, is the digestive apparatus. They are found in contact with the serous membrane, which lines the abdomen; and the mucous membrane, which lines the intestines; and especially the lower third of the small intestines. Also in the glands of the intestines — those of Peyer, most frequently; but those of Brunner also. They very frequently, also, attack the glands of the mesentery; and the emaciation, always attendant upon the last stages, is owing to these glands becoming enlarged, and indurated, and obstructing the flow of chyle. These deposits are also found, in the larynx; the cervical glands; the brain; the kidney; the uterus; the testicle; the spleen; the liver; the heart, &c. &c.

But, altho, the tubercular deposits are sought after more particularly, and are the most interesting, yet these are by no means the only morbid products, which dissection exhibits. The lungs are found to be

indurated, inflamed, and partly hepatized – to be in a state of chronic pneumonia. The pleura exhibits false membranes, in greater or less quantity, and of variable firmness – but sometimes so firm, that when we endeavour to remove the lungs, they are torn in pieces, before the bands will yield. The mucous membrane which lines the larynx, trachea and bronchi, is very frequently ulcerated – the latter especially, near the vertebra. When the mucous membrane of the vocal chords, is ulcerated, the voice is affected, and sometimes reduced to a whisper. There are various changes in other organs, but of which it is unnecessary to speak.

In connection with the morbid anatomy of Phthisis, a number of collateral, and explanatory points arise, on which it is necessary to bestow a passing glance.

It is extremely improbable, that there should be but one tubercle, in the lungs of a person. That such a thing is possible is admitted; but, when present, they are almost always numerous. The symptoms would be slight, and obscurely marked, and in all probability, recovery would be the result; after death might intervene.

Tubercles are most frequently, indeed almost invariably situated in the upper lobes of the lungs, and in their-

posterior part. These peculiarities have been noticed by all the dissectors, most conversant with the subject: many of whom have offered hypotheses, explanatory of the circumstance. Some suppose that it is owing to the confinement, and pressure, which these lobes receive, in consequence of the peculiar formation of this part of the thorax. This confinement subjects it to congestion, which by producing functional derangement of the lungs, predisposes to phthisis. And that the dress, by exposing this part more than others, may be considered as an exciting cause.

Observations prove, also, that the left lung is more obnoxious to this disease, than the right. In one hundred and nineteen cases, observed by Morton, the

Right lung was principally diseased in	43;
Left " " "	67;
Both were equally diseased in	9.

Other tables might be quoted, were it necessary, in confirmation of this statement.

It is a generally admitted fact, at the present day, that tubercles are deposited from the blood. Various notions have been entertained, at times, on this point. By some it has been considered to be the result of inflammation —

but though frequently present in connection with, it does not appear that inflammation induces the deposition of tubercular matter.

To determine the particular tissue of the body in which tubercles are deposited, has afforded matter for some discussion. By one, it is maintained, that they are deposited in every tissue of the body, except those of horny consistency; by another, that the cellular tissue of the different organs contains them: while a third, declares, that its favourite seat is the free surface of mucous membranes: and that when mucous membrane enters into the composition of the diseased part, it is entirely - or at least chiefly - affected.

Another point, upon which unanimity of opinion is far from existing, is as to the precise spot, where the softening process commences. Some suppose that it commences in the center of the mass; in proof of which they declare that each crude tubercle, when cut into exhibits a point near its center, where it is as fluid and soft, as in the stage of maturation or softening. While others believe that the softening process commences at the circumference of the mass. That being an unorganized mass, it excites inflammation of the surrounding lung, which in turn

reacts upon itself, and that thus, the mass becomes gradually broken down. These explain ~~explain~~ the appearance of the softened spot in the center of the crude tubercle, by declaring that, when the tubercular matter is deposited from the blood, only a portion of the deposit becomes hardened, while the central portion remains of fluid consistency.

Tubercles take their shape from the tissue, in which they are deposited; and are not necessarily of a rounded form. It is true that they mostly assume the spherical shape; but this is so, because, the tissue in which they are deposited is equally distensible in every direction. But when they are situated in, or about, the smaller bronchii, they then assume a cylindrical shape; but if any one, were to cut one of these bronchii across, after the deposit were cylindrical, the cut extremity would appear to be a segment of a sphere, and if the examiner were to suppose the deposit globular, he would be deceived. Thus the opinion that tubercles are always spherical, after, seemingly well supported by facts, is not strictly correct.

There is another point, connected with the softening and breaking down of tubercles, which is extremely interesting. Bronchical tubes are divided, and, opening into the cavities,

afford communications between it, and the larynx. The blood-vessels are not thus divided — if they were, death, from haemorrhage, would be the inevitable result, in a few moments. How is it then that the blood-vessels escape? This seems to be effected in two modes. In one they become impervious, and traverse the vomicae as a solid mass or cord. In the other, from their inherent strength, and the facility with which they yield, when pressed upon, they gradually recede before the enlarging tubercle; so that when softening commences, they are no longer within the sphere of its influence.

Tubercles are not confined to the human species. If any intertropical animal be brought to our latitudes and especially, if — being accustomed to an active life in the open air of his native wilds — he be confined in a small cage, and in a situation, where the sun is pre-vented free access to him, tubercles are extremely liable to be deposited; and the animal dies of Phthisis Pulmonalis. When visiting menageries, it is not an unfrequent occur-rence to hear the animals cough, and give other eviden-ces of pectoral complaints. The lion, horse, cow, sheep, rabbit, monkey, and hog, have been known to be

tuberculous: the same is also true of the parrot, turkey, and fowl, and also of reptiles.

The symptoms of Phthisis, may be divided into two stages. The first stage embraces the period from the first inception of the attack, until it has become fully formed. The second begins when the first terminates, and comprises the whole time, which the disease requires to run through its course. The first corresponds with the stage of miliary granulations; the second with that of softening. That we should diagnose the disease in its first stage, is of the utmost importance, because, by subjecting the patient to a certain regimen, and attending to other particulars, to be mentioned hereafter, we may increase the chances of life an hundred fold.

The first thing, which attracts attention, to the condition of the patient, is a gradual undermining of the general health, and a sense of languor, and a desire to avoid all exertion, whether mental or bodily. The breathing, too, is less free, than formerly, and, especially, at night or going up stairs, or ascending a hill. A slight degree of irritation about the larynx, and, especially marked, in the morning

and attended with cough, and the expectoration of frothy mucous, is also present. The cough is not very well marked, but is persistent, and of a dry, hacking character. The expectoration consists of little else than saliva, mixed with some mucous, but, is troublesome, in the morning, and gives rise to some hawking, in order to dislodge it. Some wandering pains about the chest or shoulders, are sometimes observed. When of a dull character, they are mostly rheumatic; but when acute, and sharp, are caused by a small pleurisy. One of the most constant of the symptoms, and one which is almost pathognomic, is Haemoptysis; which occurs in two of every three cases. Indigestion; irritability of temper; and a marked change, in the character of the voice, are sometimes observed; as, also, burning of the palms of the hands, and soles of the feet. Changes in the appearance of the eyes, also, occur; at one time, they are bright and sparkling; at another, morbidly dull. The patient is restless, at night; and subject to dreams. Diarrhoea may also be present. At first these symptoms are all indistinct and badly defined, but, as the disease progresses, they become better marked, until at last, when the second stage has arrived, no doubt

can exist in the mind of any one, as to their character, and then others are superadded.

The emaciation, partial at first, has steadily progressed, until it has become extreme; even altho the functions of the digestive apparatus remain unimpaired. The pulse has been gradually increased in frequency, while, at the same time, it is irritable; and readily accelerated, by emotions, moral or physical. The features are sharpened, and the countenance is pale, with a blooming spot on either cheek; or it may be very pale, at one moment, and at the next, unusually flushed. Pains in the chest, are, perhaps, generally present, altho many patients declare, that they suffer little in this respect. These pains are variable, in different cases. Sometimes consisting of a sense of weight, and constriction, while at others they are the acute, sharp, distressing pains of pleurisy: which may cover a large space.

The lungs may, in truth, be considered as among the most insensible, of the organs of the body. Inflammation, sufficient to destroy their texture, may be present, and yet betray its presence, by little or no pain. The dyspnoea, altho present, is not to any great degree troublesome, unless the patient makes great exertion. Sometimes the difficulty of

breathing, after being present, in the early stage, almost entirely disappears, during its subsequent course. The cough becomes very distressing - disturbing the rest of the patient, if not successful, in driving sleep from his couch entirely; or if checked by opiates, during the night it returns with redoubled energy, the next morning, and perhaps accompanied with some vomiting. But, if mostly present, this symptom is sometimes absent, while at others, it is intermitting. The cough is generally dry, at the commencement of the disease, or else simple mucous is expectorated; but as the softening process gradually progressed, the sputa become greenish, or opaque, or streaked with yellow lines; or it is almost entirely purulent. Then, after a time, little whitish specks of matter, are expectorated, which resemble grains of boiled rice: these are crude tubercles. Sometimes the expectoration appears in rounded masses of great firmness, and consistency, and of a greyish-white, or ash color.

Hectic fever always appears, during the second stage. At first there is, generally, but one paroxysm during the twenty-four hours; but after a time, there will be two. One will commence about noon, and last a few hours,

when it will gradually pass away; and then, after a few hours intermission, the second will commence, and and follow a course similar to the first. Sometimes, however, it assumes the intermittent type. Some hae-
-moptysis may occur during this stage; but much less frequently than in the former. When it does occur, in any stage, it generally transudes through the coats of the vessels; but an artery may be divided, or become diseased, and burst - giving rise to profuse haemorrhage. Diarrhoea is of very frequent occurrence, and a source of great annoyance and discomfort to the phthisical patient; as well as the most effectual means of break-ing down his remaining strength. We are fully prepared to expect this symptom. Among the morbid lesions, ulceration of the mucous membrane of the intestines, as well as of the glands there situate, was enumerated - this ulceration will fully account for the persistence of the diarrhoea. In connection with this latter symptom, vomiting is frequently observed. Oedema is, also, generally present during the second stage, but gives rise to but little uneasiness.

A peculiar incurvation of the nails, and alteration of the ends of the fingers, occurs in an advanced stage of Phthisis. The voice, also, almost always, becomes altered on account of ulceration of the vocal chords. It becomes weaker, and more or less hoarse, and sometimes so faint, as to be almost entirely indistinct. The sufferers from this disease, are remarkably hopeful, and are hard to be persuaded, that they are labouring under an incurable disease. Members of the profession, even, have exhibited this peculiarity.

These are some of the symptoms of the second stage, mentioned by authors: some have also described a third stage, characteristic of its fatal termination but as when it has thus far progressed, no one would mistake it and, as it is then necessarily fatal, no good can result from describing it.

The symptoms, above enumerated, are those, which have been known to all practicioners, from the earliest times, and by the aid of which they were, generally, able to make an accurate diagnosis, especially, when the disease was well formed, and considerably advanced. But since the made of

examining the chest, introduced by Laennec, has become generally adopted, it is almost impossible to form an erroneous opinion of such a case, even in its earlier stages, and when its detection, is peculiarly valuable. As in the case of the general symptoms, the physical signs may be divided into two stages. The first of which corresponds with the period of milliary granulations; and the latter with that of softening.

By simply inspecting the chest, little information is to be obtained. There may be some depression above or below one, or both clavicles, but as we, perhaps, have never seen the chest, before the inception of the disease, we must be careful not to attribute to disease, what may be the natural condition of the parts. By applying the hand to both sides of the chest, and requesting the patient to speak, or cough, an increase of the vocal thrill may be detected. In the earliest stage, and especially, when, but few tubercles are present, little alteration is perceived on percussion: but when numerous or later in the disease, there is some dullness of the part, and less elasticity of the ribs. When the stethoscope is applied, we observe that the natural respiratory murmur is diminished, and feeble; and that bronchial respiration is present, owing to the air being denied access to the air-

cells, and the respiration being restricted to the bronchial tubes, while the indurated lungs, subserve the offices of good conductors of sound. The voice and cough of the same part, are heard at the same time, with greater distinctness. The inspiration and expiration are found to be interrupted. The inspiration for a time, and is then interrupted - then it enters again, and is again, interrupted, &c. The expiration, which is not as long as the inspiration, in the healthy individual, is found to be much longer, in the phthisical patient.

But as Phthisis generally progresses rapidly, altho the physical signs, in the first stage, may be a little uncertain, yet in the second stage they assume a certainty, which bears the physician, no farther room for doubt. The parts immediately above and below the clavicles, have been retracted, partly owing to the adhesions, which have been formed between them and the apex of the lung; and partly to the emaciation of the patient: the ribs are also much flattened, and the shoulders more angular. When the hand is now applied to the chest of an individual speaking, the vocal thrill is found to be very much increased. Percussion gives a dull, flat, sound, generally; but if there be a large superficial cavity the sound may be clear & resonant.

Among the earliest of the indications, elicited by auscultation, in the second stage, is the clicking sound, caused by the passage of air, through the breaking down tubercular mass - this is the first indication of the formation of a cavity. Now the bronchial respiration is distinctly perceptible, and the blowing respiration, can also be detected; but the vesicular murmur is entirely wanting.

When the softened tubercular matter has been expectorated, a cavity is formed, and air may be heard to pass into it at every inspiration, and especially, if the patient cough - this sound has been called cavernous respiration. When the cavity is large, and the bronchial tubes entering it small, the air may be heard to enter with a puffing sound, which has been compared to that made by blowing into an empty cask or bottle: and hence called amphoric respiration. When the cavity contains fluid, the air, passing through it makes a gurgling noise, similar to that produced, by blowing through a tube, the farther extremity of which, is immersed in fluid - this is called gurgling respiration. When the cavity is situated near the surface of the lung, and communicates freely with the bronchi, every word, which the patient utters, is heard with remarkable distinctness

by applying the ear to the chest — this is called pectoriloquy. When a large abscess contains both air and fluid, at times a remarkable sound is heard, which resembles that produced by dropping a small shot into a glass vessel, or by striking a metallic vessel with a firm substance — this is called metallic tinkling. — Such are some of the physical signs, which are present in greater or less quantity, in every case of Phthisis Pulmonalis.

Having just described the symptoms of consumption, it is scarcely necessary to repeat all that was then said, merely because we are about to consider its diagnosis. The disease is obscure or well marked, according to the extent of its ravages; and when obscure it may be difficult to distinguish from chronic bronchitis, but if the symptoms above described are well understood, and investigated, little hesitation need be experienced. In order, however, to avoid all possible sources of error, let us compare the symptoms of the two together. In chronic bronchitis, the morbid sounds are detected, in the lower lobes of the lungs; while in Phthisis they are situated in the upper. The former is attended with the expectoration from the commencement; while in the latter, this symptom comes on late in the disease.

In the former, the pain is situated, in the region of the stomach; in the latter in the side or back. Phthisis, also, furnishes some symptoms, which bronchitis rarely, if ever, does: among these, may be enumerated haemoptysis - which is connected with tubercular deposit, in ninety-five per cent. of cases; a sweating of the chest, and burning of the hands and feet; a double pleurisy; ulceration of the larynx, not caused by syphilis; and diarrhoea occurring without any obvious cause - these are diagnostic of Phthisis.

The prognosis is very grave: although cases are cited by professional men of undoubted attainments and veracity, in which the tubercular matter had softened, and a cavity formed, and yet these patients recovered. These examples furnish the rare exceptions and not the general rule. Undoubtedly we are not to despair of being able, to render assistance, when in its incipiency, and but a small portion of lung diseased, or when it occurs in persons, in easy circumstances, who need not necessarily expose themselves. But when fully formed, it is almost invariably fatal.

One of the most interesting points, if not the most interesting, in any disease, is the

determining, by what means, it is produced. To know the cause of a disease, is, frequently, to know how to prevent, or cure it. Unfortunately for humanity, in no disease, perhaps, is so little known, in regard, to causation, as in Phthisis Pulmonalis. It seems to be a generally received opinion, among practicioners, that consumption occurs by far most frequently in those, whose parents have been its victims. Children are observed to bear a striking resemblance to one or both parents in personal appearance, and in deviations from the natural appearance. Thus; the thick lip has characterized the house of Austria, for centuries; and there is a case recorded, where the descendents of a person, who had six fingers and toes, were marked by this peculiarity for several generations, and born, until the account was written. And while inheriting bodily peculiarities, it is reasonable to suppose, that the germs of future disease, are inherited also. But there are additional causes. Vicissitudes of temperature; an insufficient supply of clothing, when exposed to a cold, or moist atmosphere; an indigestible diet; dwelling in low, damp, situations, where wholesome air, and genial sunshine, cannot come; a sedentary course of life; the abuse of intoxicating liquors; unnatural excesses, in youth; mercury;

mental anxiety; confining occupations; too close an attendance at the school room; mal formation of the chest - these may all bring on consumption, in some persons. But since a very few only, of those, who are placed in similar circumstances, and undergo equal hardships, and exposures, are destroyed by consumption, we must suppose that a peculiarity of constitution, or a predisposition, must act in cooperation, with the above mentioned causes, to develope the disease. It may also, sometimes, be referred to attacks of other diseases, as bronchitis, pleurisy, pneumonia, remittent, intermittent, and exanthematous fevers, &c.; as, also, a stooping posture, unnatural confinement of the chest, exertion of the lungs in speaking, or playing on wind instruments, &c. Any thing, in short, which will lessen the strength, and weaken the tone of the general system will, in the predisposed, act, as exciting causes.

Allow Phthisis at one time, was supposed to be contagious, and is still so considered, in some countries; the most enlightened, at the present day, believe it to be devoid of this quality. But, at the same time, it is not advisable for relations of consumptives, to remain too much, in the same room, with them. The same predisposition, which existed

in the first, may exist in the others also; and when to this is superadded the wakening effects of watching in the sick room; the want of pure air; the irregular hours for sleep; the sympathy; the want of exercise, and perhaps the exhalations from the patients body, Phthisis might readily be excited.

The most natural division of the treatment of Phthisis, is that followed by Dr. Watson, viz. the method of preventing its formation, when likely to occur; of arresting its progress, when in the incipient stage; and of alleviating the most distressing symptoms, when it is fully formed. Let the physician fulfill all these indications, and nothing more remains to be done.

The means employed, for preventing its formation, when likely to occur, are few and simple. The patient must remove to a warmer, more equable, and salubrious climate. Cold alone, is not so very inimical to life, or conducive to Phthisis: in proof of which, it is only necessary to refer to the fact, that persons, living in the coldest and most miserable regions of the earth, as Siberia, Lapland, and Greenland, are by no means as frequently attacked by it, as the citizens of England, France, and the U. States.

While, on the contrary, as many of the native residents of Italy, die of consumption, as the same proportion of the inhabitants of Paris; and besides, when it attacks persons, living in countries of the temperature of Italy, it runs through its various stages in a much shorter time, than in France. Sudden changes in the temperature (an accusation to which the temperate regions must frequently plead guilty) seem to be more injurious, than mere frigidity alone; and when to this we add moisture, we have that combination of circumstances, which is most conducive of a fatal termination.

The patient, then, need only take drugs, sufficient to insure the regular discharge, of the contents, of the alimentary canal. He must, however, go to a warmer, dry and equable climate, and be careful to prevent the derangement of the functions of any of the organs of his body, and at the same time, sustain his general health, and the tone of his system. This is best done, by living on a plain, easily-digestable, unstimulating, but nutritious diet; by clothing the body warmly; keeping the feet dry, and comfortable; employing the shower-bath regularly; avoiding all excesses, and indulgences; keeping

regular, and early hours; remaining much in the pure air, and taking exercise therein. This is the course most likely to ward off its visitation.

But, most frequently, the advice of the physician is not required, until the disease has become fully formed. Can we, in this case, arrest its progress? Have we, at our command, any remedies, by which we can produce the absorption or resolution of the tubercular matter? If every article of the Materia Medica were combined into one catholicon — neither this nor any one singly, is equal to the task of effecting the absorption of a tubercle, in the lungs. Medicines, then, can do but little, in this, as in the preceding stage.

If there be inflammation of the parenchyma of this organ, a vein may be opened and a small amount of blood abstracted; no more, however, than is sufficient to counteract the inflammation. Mercury is highly injurious; and should not be given to any scrofulous or phthisical patient. Counter-irritants to the chest in the form of blisters, setons, &c. are sometimes very useful, when this part is painful; and when necessary to use any, some ointment containing iodine, perhaps, acts most

beneficially than any other. Inhalations of iodine, chlorine, and kreasote, are sometimes very useful, also; and, especially, when there is but little bronchial inflammation. Few drugs are administered to the stomach, and these are taken for their roborant properties. Iodine, iodide, or carbonate of iron, and arsenic, are occasionally given; but in doses, sufficiently small, not to derange the functions of the digestive apparatus.

But, altho, medicine can do little, for the patient, management may do much. He should proceed to a more temperate climate, and follow the plan laid down, for the preceding stage — spending his winters in warm, and his summers in mild, dry, and salubrious situations, or should take a sea voyage. If his circumstances prevented him from following this plan, he should take as much exercise, as possible, short of producing fatigue — that on horseback is most appropriate. The diet must not be stimulating, but yet generous, and nourishing, with the habitual use of a small quantity of Wine, Brandy, Porter, or other stimulant.

After the softening process has been established, in the tubercle, all hopes of saving the life of the patient may be abandoned; for although such a result is sometimes witnessed, we must not expect it to occur frequently. To send him, when in this condition, to a southern climate, is to make him exchange the comforts and conveniences of home, and the kindly offices, and sympathies of attached relatives, for a residence among strangers, with but few friendly hearts, to anticipate his wishes, and hands to administer to his wants – to make him leave that spot, endeared to him by a thousand local ties, to die in a strange, and perhaps foreign land.

Yet, something, may still be done, to soothe the remnant of an existence, speedily to terminate. Remedies may be employed to alleviate the most distressing symptoms. One of the most distressing of these is the nocturnal perspiration. A remedy, frequently used to combat this, is the dilute sulphuric acid; but this is inadmissible when there is a tendency to diarrhoea, as that is considerably

increased thereby; but if on the other hand, the bowels are costive, this is an efficient remedy. If this should fail, we must resort to some others, as the muriated tincture of iron, or sponging the surface of the body, in the evening with vinegar and water. The diarrhoea may be combatted, by the administration of the acetate of lead, in combination with opium; or by kino, and chalk; or rhatany; or colomba, and lime water; or sulphate of copper; or by starch enemata &c. We may try some one of the foregoing list of remedies, and if it stops the diarrhoea, our object is accomplished; but if it fail (as will frequently happen) some one, or all of the others, may be resorted to. The distress, arising from a troublesome cough, may be mitigated, by using mucilaginous demulcents; or anodynes, as opium, and paregoric; or nauseants, combined with anodynes; or syrups of wild cherry &c. When there is copious haemoptysis, we must treat this by blood-letting, astringents, cold, and other appropriate remedies. For the nausea, and vomiting, hydro-cyanic acid, or an effervescent draught, or a few leeches, or a blister may be applied. And for the

hectic, digitalis, carbonate of iron, prussic acid, and quinine. The patient, in fine, must be kept quiet; his strength supported; the worst symptoms combatted; and the dissolution, whose approach no human skill can arrest, be stripped of its distressing concomitants, and rendered as comfortable and easy as practicable.

B. Rush Ridgely.

An
Inaugural Dissertation
on
Dysenterry
Submitted to the Examination
of The
Provost Regents & Faculty of Physic
Of the
University of Maryland
For the
Degree of Doctor of Medecine
By
Francis N. Cleft

Dysentery

There are few diseases which come more frequently & immediately, under the notice of the Physician than the subject of this dissertation and none I may add, which has met with more injustice at the hands of those looked up to as the guardians of Health. The ravages of this disease have been felt in every age & clime: at one time clothed in mild & gentle form; at another we find it malignant & powerful baffling the profoundest judgement & most perfect Skill.

Thus has Science been caused to weep over objects of her peculiar care felled by the hand of omnipotent disease.

The young physician in his first efforts must guard against the various theories which inundate the Students path & render medical Science a labyrynth whence there is no exit.

Such principles alone can guide him

in his dimly lighted path, as are founded on the best pathology which cannot disappoint him at the bed side where he most needs the aid of professional experience. Such pathology too I may add as at once furnishes the clue to the proper remedies to aid the vis medicatrix naturæ. Or if relief be not in our power, to soothe at least the dying pang & smoothe the pillow of death's icy couch. Yet how often is the tyro driven into Scilla as he is endeavoring to escape Carybdis— But to the subject—

The history of dysentery as it has descended from age to age & clime to clime would afford a theme too lengthy for a dissertation, for which neither time nor space could be expected to be granted. Nor is it my purpose to enter into a discussion of the innumerable theories which have occupied the brightest stars that have ever adorned the medical Horizon; suffice it to say that our

most heart felt gratitude is due to those zealous fathers of the Healing art, whose lives have been spent in searching for truth, for whose gigantic minds no cloud was so high that they could not soar above & no depth so deep as to be fathomless — Their writings are monuments more durable than brass their fame justly equalls the world's extent: for what fame deserves greater promulgation than that of him who denies himself every comfort to relieve the suffenings of his fellow man

Dysentery from its derivation properly signifies a difficulty of or in the intestines; the nature of which is inflamation of the the parts affected, most frequently the large bowells but often extending into the surrounding parts

Not only do we find simple inflamation involving the different coats of the digestive tubes tuberculeration & sphacelous also are not unfrequently met with in autopsies, an admirable specimen of which has been

exhibited to us by Professor Stokes in his lectures on this subject in Dublin.
In one case there was inflamation ulceration and sloughing of the mucous coat in an other the whole surface of the colon was covered with patches of coagulable lymph and it was the opinion of this learned physician that all the different coats participated in the inflamatory process except the serous—
These facts are not new for Hypocrates & Galen and a hosts of others agree most accurately as to the pathology & seat of this disease.
The fact of this malady visiting many places as an epidemic, furnishes more cases by which pathological knowledge may be gained, than any other except the cholera. Many well marked cases may be cited from the well known epidemic at Amsterdam from which I have selected the following as the most striking & because they show

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most plainly the nature & ravages of the disease under consideration In the case of a woman who fell a victim to dysentery from her own imprudence we are told that there was sphacelation of the omentum which was of a dark livid colour; the duodenum and jejunum were filled with bile; the ileum and colon were perfectly softened by the inflamation.

In the case of the son of Jacobus Fontanus the whole length of the colon was filled with ulcerations, the rectum itself being wholy involved, the coats being more or less corroded by ulceration.

In other epidemics we find that the glands of Peyer & Brunner are more particularly the seat of ulceration

But it will be well to mention here the principle causes both proximate & remote which give rise to dysentery—

Sydenham were as told, believed that this disease was produced either by contagion or a check of perspiration

Others supposed that the larva of a species of acaris caused the inflamation and many thought that the presence of scybala in the colon gave rise to the disease for which purging proly was the only remedy of any value
Cullen was of the opinion that cold could not produce it without the aid of cotagion which must be previously ~~to~~ taken into the system & consequently he considered the remote cause.
Happily however for the human family modern pathology has drawn the curtain from the hidden chambers of lethiferous disease & pointed out the true nature & treatment of this complaint.
Dysentery may be caused by fruits of various kinds - change of temperature, water impregnated with the different species of the mineral kingdom, intemperance the presence of scybala in the colon & ileum; by excessive heat or cold - dampness & more frequently by imprudence in diet

the blood finding an obstruction to their natural outlets are forced to seek a weak point through which they may escape Thus in a sudden check of perspiration we are told, that certain effete particals of the body are carried back into the circulation & finally poured out into the intestinal canal - which deserves some credit because it suggests a mode of treatment not unfrequently successful in the hands of a judicious practitioner The season of the year too, at which the heated atmosphere acts on the liver, spleen & neighbouring viscera, upholds a doctrine though not entirely false yet not sufficiently seductive to bring many votanists in its train, affording more scope for the speculative imagination and offering many truths to him who searches for true knowledge of disease in every theory presented to his well trained mind - Much information may be acquired from the the theory of heat & cold in their action

on the circulatory system, causing a greater or less determination of blood to certain parts of the body and thus destroying the equalibrium of circulation
Thus in warm climates we find a determination of blood to the capillary vessels of the skin & in northern or cold latitudes this determination is to the viscera.
Some authors however pretend to say that these interuptions of circulation are effects rather than causes on the ground that "ubi iritatio ibi fluxus humorum", & that irritation being produced by some other cause there is a necessary determination of fluids to these parts.
In my humble opinion there must be some exciting cause to produce this irritation such as indigestible articles of diet, fruits that are not sufficiently ripe &c.
Thus also is it that every author who has an idea of his own on the subject finds some pathological phenomenon to bear him out in his theory—

Malaria has been supposed to be an exciting cause, yet those who advocate this theory, have most signally failed to furnish proof, although the frequency of its occurence in malarious districts seems evidence almost incontrovertable
Be this as it may, one thing is certain, that is, that the idea of malaria suggests no plan of treatment by which the invalid may be relieved of his sufferings
Among the most frequent causes, may be placed that of biliary derangement which is shown by white discharges where there is an absence of bile & dark watery evacuations where there is an excess of morbid bile, which derangements are frequently met with in warm climates & suggest most plainly the remedies to be applied
The Humeral pathogist- too claims our attention for with testimony as conclusive to his mind as Holy Writ to the Christian he firmly believes that impurities of

The symptoms of dysentery are so plainly & well marked that he who fails to recognise it cannot boast of much power of diagnosis. The principal ones are constant desire to have an evacuation - great bearing down, with great pain, the passages being either light from absence of bile dark green from an excess of acid bile, mucoserous, or bloody serum or scybala which are brought away in large quantities by purgatives -

To these may be added the general symptoms, such as fever, rigors and excessive pain which may be relieved by pressure over the abdomen, thus giving a diagnostic symptom which in cases of parturition or in ordinary cases distinguishes it from peritonitis.

As to the diagnosis there are but few diseases with which it may be confounded these are diarrhea & cholera, in the first of which there are copious discharges in which the articles of diet passes

through the intestines in a state of indigestion - the length of time which they discharges continue is another distinctive symptom - The symptoms of cholera are too well marked to require any comment. It may also be confounded with hemorrhoidal flux, in which the discharges are so purely bloody that there is little or no difficulty in distinguishing betwen the two diseases. Having said thus much with regard to the history causes &c we may very appropriately say a few words concerning the treatment and modus operandi of the remedies used -
The treatment is as various as are the causes which produce it & he who thinks to cure every case by the same remedy will find when put to the test that he will be mistaken when it is too late. Thus in the hands of quacks, routinists & empirics many valuable lives are lost when the truly scientific & judicious may have quickly given relief -

The treatment must, most undoubtedly be guided by the cause on a principle well worthy the consideration of the practitioner viz "causâ remotâ tollitur effectus."
It is true, there are very many cases which are of so mild a form as to require very little treatment except such ~~remedies~~ as are found in every well regulated family—
Whereas on the other hand there are cases of so severe & violent a type as to require the utmost skill of the physician to combat this disease successfully which in many cases proves fatal from want of timely application of the proper remedies.
In acute dysentery the treatment consists in allaying the general inflamation & pain for which purpose bleeding both general & local have been resorted with signal success. Thus pro re natâ we bleed freely from the arm & if the fever do not yield readily the application of twenty or thirty leeches followed by

anodyne poultices or emollient enemata; the warm bath & in warm climates the use of calomel with Dover's powder & opium have been highly recommended by the best authorities.

In such cases as are produced by an absence of bile in the above evacuations five or six grains of blue mass 2 or 3 times daily in combination with a half or a grain of opium or five or ten grains of Dover's powder will be found sufficient. Where there is a copious discharge of acid bile the following will be found an admirable prescription ℞

℞ Hydr cum creta gr xviij
Hydr Protochlor grij
Pulv G. Opii gr iv
Marsh Specac. gr iv
" Chart vi

of which one powder should be taken every three hours until the stools become natural & healthy in their appearance. Ptyalism should not be produced with a view to the curative effect of mercury

With regard to chronic dysentery much might be said concerning the various modes of treatment, both practical & theoretical, but the short space allotted to a dissertation like the present prevents the addition of anything that is not actually necessary. In chronic dysentery our main reliance after the use of calomel as an alterative & the blue pill to excite a healthy secretion of bile, is in astringent tonics the best of which are the sulphates of copper, zinc & iron; the acetate of lead nitrate of silver & muriated tincture of iron.

Opiates have a deservedly great reputation in the chronic forms of this disease. The experience of many cases of which I have learned from him who has had considerable practice in chronic dysentery warrants the suggestion of his favorite recipe which is as follows.

℞ Argenti Nitratis grix Mdf pil xvj
Pulv. G. opii grx Ope pill to be taken
Pil Hydrarg ℈j every three hours

In the form of this disease unprecedd by diarrhea castor oil & emollient enemata have been found very serviceable, because in such cases we are most apt to find that the dysentery is produced by the presence of scybala which if they be not speedily removed by cathartics become such a source of mechanical irritation as to produce sloughing of the colon when they are most generally found. The presence of scybala is known best by the discharges being of a watery mucous or bloody nature; there being not unfrequently shreds of fibrine. When fruit has been the exciting cause cooling medicines such as Rochelle salts and antimony have proved sufficient when followed by some gentle anodyne as a matter of course abstinence from fruits of all kinds is advisable until every symptom has disappeared. In those cases which are produced by improper articles of diet, such as stale

meats, sour bread or bread made from a bad quality of flour the treatment is similar to that before mentioned together with total change of diet.
The same may be said of dysentery produced by vitiated water, in which case change of place has alone frequently been sufficient to arrest the disease.
As to that form of dysentery produced by check of perspiration the very cause suggests the plan of treatment It immediately suggests itself to the reflective mind that the warm bath & sudorifics are our main remedies. Dovers powder warm poultices, clothes wrung out in warm water & applied to the abdomen wrapping the patient in warm flannel or warm fomentations of hops & whisky apply in flannel cloths.
The warm foot bath with the addition of mustard or cayenne pepper, has been found to be a most excellent adjuvant in such cases.

to be followed by demulcent or mucilaginous drinks which exercise a soothing & sanatory influence over the digestive organs. Change of air, sea bathing, and the like are very serviceable. The change from a warm to a cool climate is very highly recommended by the most eminent practitioners in the southern States. With these remarks, simple indeed in their nature, the author submits his first & almost abortive attempt to those who kind indeavors to instruct him in the healing art, demand the warmest gratitude & most heartfelt thanks

An
Inaugural Dissertation
On
Scarlatina
Submitted to the examination
of the
Provost, Regents & Faculty of Physic
of the
University of Maryland
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of
Doctor of Medicine
By
Henry A. Dilly

No disease in the whole tribe of exanthemata has attracted more attention, by scientific writers than scarlatina. It may, and undoubtedly has been considered by some even eminent and respectable authors, as a disease little deserving, of our attention; and one too, strange to say, seldom or never fatal. Independent of this, I cannot but rank it among the many numerous and fell destroying maladies which year after year carries off a hundred, victims to its deadly poison. But whence comes it, that so many foolish and unfounded conjectures have, may, even continue to emanate from the minds of wise and great men (for so they are called) respecting the fatality or non=fatality of diseases? I cannot tell unless it be simply from the want of experience, or of experience was granted them, they were unable to gain thereby; hence it is, why scarlatina was for a long time there considered as a simple and harmless disease, requiring "little or no attention!" And it would seem, as even yet to be looked upon by some, as unworthy of notice: We see it overlooked by many of our

able and eloquent Lecturers, in the Public Schools, and passed by without even taking a glance at its fearful nature. And why this? it is because, it is often-times the opprobrium of our art. Surely not because, it is a harmless complaint and easy to cure. Though it was once believed, that scarlatina was nothing more than a simple disease requiring only common attention, quiet and simple diet, we are now taught to learn that it has its sting as well as bee's. Few writers will now venture to affirm, that the disease under consideration is, as it is too frequently pretended, nothing more than a common rash attended with little or no febrile symptoms, and of course requiring a treatment simple and easy. True, this may hold good in the simple variety where undoubtedly the disease would be more likely, aggravated than relieved by the minia medica diligentia. But how different do we find scarlatina anginosa, and still more in the malignant grade; what a wide contrast do we behold in the two forms of disease, not in nature, but in the volume of their character. Shall our treat=

ment in this variety be restricted merely "to simple diet and rest," our patients would too often be left to the care of dame nature alone, without the assistance which art can certainly in many cases afford. Yet as regards the treatment of scarlatina maligna much is still to be learned, a wide field is yet open to speculators; but it is only open to the wise, experienced and judicious practitioner, for the fruitless labours of the ignorant are worse than nothing, and attended by far more evil than good.

But enough of this; we have seen fully into the disease to make it interesting, and at the same time not a little deserving of a moderate share of our attention. Its frequent ~~and~~ appearance, and its fatal tendency have indeed claimed the exertions of many learned and highly respectable practitioners, and actuated them to trace deep its nature and to enquire into the most successful mode of treating it.

Though many learned and procare worthy men, have made scarlatina their particular study, yet nothing seems definite or certain relative

to the history of scarlatina, since that for many years it was confounded with Rubeola, and considered by the ancients as one and the same disease, or rather it was looked upon as a variety of Measles. This impression seems to have been retained by Medical men until the close of Eighteenth century. In the middle of the seventeenth century, the medical world question was asked, why the disease sometimes appeared as "small pox" and at others as measles. Sir Wm. Watson, in 1769 was unable it appears to distinguish, or at least if he was able, did not make any distinction between the two diseases. Even Morton scorned the name of scarlatina and wished its appellation to be rescinded for ever from the list of Nosology.

Dr. Bateman thinks no accurate distinction was made between the two affections until the second Edition Withering's Essay on scarlatina in 1793. Dr Tom Watson states that the first characteristic difference between scarlatina and Measles was first fully specified by Withering. All this seems very strange, even to the young student, I cannot think it possible

that men of experience and learning, whose lives were spent in the observation of diseases, could with the least appearance of their judgment, suppose Scarlatina and Rubeola to be identical! But such was indeed the case, and we can do no more than wonder at the ignorance of our forefathers; for such appears to be the law of science, the present laugh at the past, and those to come will laugh at the present.

Scarlatina Ever since it has been described as a separate and distinct disease, has been divided into three varieties and by some into four. Which are First—

Scarlatina Simplex when there is little or no febrile action Cutaneous Eruption appears in the usual mode, but the mucous membrane of the throat remains free from inflammation

The Second variety, is when the symptoms are of a highly inflammatory nature, fauces and Uvula red and highly injected constituting Scarlatina Anginosa

In the third grade the symptoms are still of a more violent nature, the eruption livid & partial, fever of a typhoid aspect, accompanied often with great depression; tumefaction sometimes of the cervical and parotid glands &c. This va-

variety has received the name of Scarlatina Maligna.
The fourth grade is simply the disease without the
eruption coming out upon the External surface,
but confining itself entirely to the mucous membrane
of the throat and fauces, it is called as its name imp
lys Scarlatina sine Eruptione
Thus we have Scarlatina appearing under every grade of
virulence, from the simplest and least dangerous to the most
violent Malignant and fatal disease. Its symptoms
too range in multiplied degrees from the a slight inflam
matory attack to a low and highly dangerous typh
oid depression; thus constituting the disease one
to be divided into seperate divisions and each
one respectively to be studied and pointed out in
their various and distinct forms, which assist us ma
terially in making up our prognosis and adapt-
ing our treatment to each one.
When the human system becomes influenced by the po
isons of Scarlatina, it may either show itself upon the mu-
cous membrane of the fauces or upon the surface of the skin, and
confine itself solely to one or the other of these tissues, acting
too according to the well authenticated law of poisons

or "things obnoxious to the system viz, that they may exhaust themselves on one or more of the tissues they usually effect, without involving the whole series; and they act with greater or less intensity according to the peculiar idiosyncracy of the patient"

Let us now enquire into the symptoms of scarlatina simplex, which though simple, are not unimportant; Well what can we expect to find:- A simple inflammatory excitement; which indeed is sometimes so slight as to escape notice; but usually there is a quick pulse slight creeping chills, alternating with flushes of short duration, nausea, and not unfrequently bowelling; pain in the head; and sometimes delirium; skin hot and dry; pain in the loins; and sometimes uneasiness even in the extremities; the tongue in scarlatina simplex as well as the anginose variety does not differ, being covered with a thick white cream like fur, with minute red papulæ projecting through it; white surface; the edges likewise present a bright red appearance. After the first twenty four hours the peculiar eruption so characteristic of the disease comes out, first upon the ~~mouth~~ face and neck and then

upon the extremities; often the cutaneous membrane does not suffer alone, it may even show itself upon the surface of the mouth, nostrils and fauces, and may also be seen sometimes upon the albugenia. The eruption consists of innumerable red spots, which in 24 hours spread over the whole body, coalescing and multiplying until they give it a uniform red appearance, looking, as Armstrong says, like a boiled lobster. As the skin upon the flexures of the joints is thinner and finer than elsewhere, we may expect to find the eruption here more evident. The limbs also present a beautiful erysipelatous appearance. In some cases the eruption is uniform and continuous; in others the diffusion is irregular, leaving the interspaces free and in a natural state, and generally more uniform upon the trunk, than extremities: frequently upon close inspection we detect a roughness, something like the cutis anserina, of the cold stage of rigor: which is owing to enlargement of the miliary glands and papilla of the skin: not unfrequently when the rash has shown itself regularly and diffused over the whole surface, we have a regular abatement of all the symptoms, the disease making

barely strides to terminate happily.

The regular course of the disease, in the majority of cases is as follows. On the second day the eruption marks its appearance; on the third it has spread all over the body, reaching those spots which were before untouched; on the fourth the rash stands out, fully developed. The fifth day brings with it a declining state of the fever and eruption, which continues until about the seventh, when we generally find the patient free from the disease. But we must not expect to find this sequela or abatement and speedy convalescence in all cases. The skin commences to desquamate on the eight or ninth day, coming off sometimes in large flakes, leaving a tenderness of the whole surface.

The sudden transformation of scarlatina simplex into the third and highly dangerous grade, which sometimes happens is accounted for by the distinguished Dr Armstrong in a plausible and seeming correct manner thus. "Simple excitement may readily produce inflammation, and in fact is the most frequent cause of it, for if there be a latent weakness in any organ, the simple excitement if not moderated it

sure to give rise to inflammation".

Frequently scarlatina is accompanied in its simple form, with slight derangement of the throat or fauces; the patient directs our attention there, and complains of some little uneasiness, which at most, however is very slight, and not unfrequently escapes notice. Should, however, the throat be found, to be obviously involved, then we have what Authors call scarlatina Anginosa. This variety is an augmentation of the febrile symptoms of the first stage, accompanied with derangement of the throat. Frequently, if not always, we have in the commencement of this grade, violent pain the head; a sense of oppression about the heart, muscular prostration; stiffness and a dull heavy pain in the muscles of the neck, and in the regions of the submaxillary and parotid glands, which no doubt are somewhat affected; there is also nausea and vomiting. But the most distressing symptoms arise from the affection of the organs of respiration and deglutition. So that they perform their offices with difficulty. On closely inspecting the interior of the mouth, we will find the fauces highly inflamed and swollen the palate, uvula and tonsils red and enlarged: the

tong presenting a bright red aspect, particularly at its edges and tips. And thus as the symptoms progress in their course the disease becomes more and more intense; the pulse becomes frequent and quick, but not so tense, full and vigorous as in the simple variety, thirst pretty urgent; temperature of the surface increased above that of any other febrile complaint so that it is something found above one hundred and eighty of Fr. There is also at this advanced stage of the disease, restlessness, languor, delirium severe pains in the head, and such like symptoms throughout the whole course of the disease. The eruption may not come out until the third day, and very frequently when it does appear, it only comes out partial, at other times it stands out boldly for a short time, and then suddenly disappears, at irregular and uncertain intervals, without however affecting any corresponding alteration in the general tendency of the complaint. Thus protracting the disease to much longer time, than when it appears regular and in its simple form. Sometimes the rash is very slight, while the throat suffers very considerably, and in this case we may have no diagnostication at all. Superficial ulcers are sometimes seen upon the tonsils, which however do not give rise to much

trouble. It is stated however that whenever the general ates as early as the third, fourth or fifth day, we do not see these ulcerations of the tonsils or palate, the inflammation and tumefaction passing off harmless.
The fauces do not unfrequently present the appearance of ulceration, which is caused by the excessive viscid mucous which is constantly secreted and settles in white patches upon the inflamed surface, they look indeed very much like ulcers, but we must not be deceived and take these excessive thick portions of lymph for ulcerations, if we do we will fall into mistakes; though indeed we sometimes have slough in this grade, but not so frequent as some may imagine; and when it does come on, it is almost always followed by extreme debility. But as the febrile symptoms abate, these small ulcers take on themselves a healthy nature, and readily heal; Should they however grow worse and take on a more malignant character, becoming brown, as they throw out an acrid sanious fluid, which gives the patient much trouble; a troublesome and painful cough may supervene with tenesmus, the inflammation extending down the trachea and death may take place under

symptoms of acute tracheitis; the brain also will may become complicated, during the eruptive stage, and fall into a deep and fatal coma. The abdomen may likewise become deranged attended with pain and uneasiness, vomiting and constipation generally following and augmentation of the pains. Pulse quick, and respiration anxious. After these fearful aspects have continued for six or eight days, the abdominal symptoms, in some degree abate; pulse becomes quick rapid and feeble. "Cold clammy sweats and universal collapse come on" with speedy death.

We now come to enquire into the features of scarlatina maligna. Though this variety commences as the two preceding grades, it soon assumes that violent typhoid depression so characteristic in this species of the disease. The appearance of the rash is often protracted as far as the third and sometimes the fourth; when it first comes out, it has rather a pale look, assuming as the disease advances an dark and livid aspect. The eruption is generally partial; appearing and disappearing at irregular and uncertain intervals. Sometimes it recedes very suddenly, and in a day or two, or even in the short space of a few hours reappears on different parts of the

surface; the duration of the eruptions is short, even when it does come out. For many cases, it is said by some, the first symptoms that warn us, when this malignant type is about to set in, the patient feels a pungent heat of the surface, the pulse hard and full "but becomes small, quick, and even languid as the disease advances"! Intense and violent pain in the head, amounting almost to phrensy. face not unfrequently turgid with livid flushes. As the disease advances the symptoms become more and more violent; delirium sometimes lasts, as by surprise, often taking on an intermittent character, tongue dry, coated with a brownish fur; breath fetid, anxious fretted eyes somewhat inflamed presenting a dull heavy expression, and the patient may die under symptoms of disease of the brain. The tongue and mucous membranes of the mouth, as covered with black sordes, the soft palate and tonsils present a slough, a appearance which in the progress of the disease, often becomes very extensive and requires a fearful aspect. The throat often also gives indication of much danger; indeed the sense of all mischief seems to be hidden in this spot, at least the state of the throat is looked upon as the land mark, by many authors, by which we may

pidge of the virulence or non-virulence of the malady. the throat in this variety acts the principal part — from this spot the deadly poison seems to spread, and gave new vigour to the disease, and renders it more virulent and more fatal than ever. The throat presents a foul and slough-ing appearance, breath fœtid; an acrid sanious fluid is formed, and escapes from the ~~mouth~~ nose, and trickles down the face, giving rise to inflammation where ever it touches. respiration becomes difficult, submaxillary and parotid glands more or less swollen. the cervical glands also swell and render the neck stiff; pulsations are seen; and diarrhœa may come on. If the disease rapidly becomes violent, we have sometimes collapse may commence as early as the eight or ninth day; the heat then sinks, and the animal powers rapidly fail. Hæmorrhages and painful diarrhœa set in, and the patient suddenly sinks. Sometimes we see the disease commencing in its most simple form, going on regularly and smoothly and with every prospect of terminating happily, when all at once it suddenly explodes, as it were, and the patient is seized with the violent typhoid affection.

As to the fourth variety, scarlatina sine exanthema there need little to be said; it is merely scarlatina affecting the throat only and not the surface. Though some ridicule the idea that such state of things can ever exist, others equally as respectable contend that it is as plausible for scarlet fever to appear without any eruption as it is, for the same disease, to exist without any complications whatever of the throat. That there is such a form seems easy of admission, from this simple fact, that persons taking on this fourth grade, have been known to transmit the complaint to others under a different grade that is, with a copious rash.

It is said that scarlatina may occur in the same individual more than once. I do not know how this is. I have never seen one who has had it more than once, neither have I ever heard one say that he had had it more than once. No doubt many cases are supposed to scarlet fever when in fact they

are nothing more than rubeola, that many, even now a days are unable to distinguish the two affections cannot be doubted, and thus it is by why scarlatina is said to occur more than once in the same persons. However such a thing may happen, moreover it will never do for the unexperienced to contend against the experienced; and I therefore must stay contended, that such a thing can happen. As to

As to the contagiousness of this disease there is at present little or no difference of opinion unless it be among those violent anti contagiones individuals, who in their foolish absurdity will admit of no such thing as contagion. As contagious influence, is said, to be even worse than are that of small pox, chiefly. the poisonous effects of this loathsome disease may be got rid of in almost every case by pure and fresh air. But the deadly poison of scarlatina may lurk deceitfully for months under every precaution. Knowing then that the disease is contagious it is our duty at all times to give proper advice, and by

by judicious means to ward off if possible its deadly poison. Even in the simple form we must not remains dormant, for from one who may have this simple grade, a second may catch that fatal form scarlatina Malignaj and from this a third may be taken with the second variety. So peculiar is its contagious influence, but in my opinion this cannot be owing simply to contagion or any thing peculiar in its nature but merely to the idiosyncrasy.

When scarlatina attacks parturient woman it generally ends fatally. Dr Watson only saw three cases recover from this terrible complication. Though it seems strange that such should be the case, it is nothing more than what often happens to women in this condition, when attacked by many other febrile diseases

Diagnosis

We have stated before, that scarlatina Lepra was at one time confounded with other eruptions, and seldom treated of as a separate affection. But the only

complaint, in which there is any danger at all of it being complicated with, or scarlatina Rubeola. And indeed it was formerly a very difficult thing to distinguish the two affections, and if we look still farther into antiquity we shall find, that in those days of ignorance there was no such thing as scarlatina. The Ancients placed a whole group of Exanthema under one, and varieties that should have been ranged under one head were considered as distinct diseases: thus it was with scarlet fever and measels, they were both considered as one disease, or rather as varieties of the same affection, whereas scarlatina anginosa, was considered altogether as a distinct disease, and called by Cullen of a mistake not Cynache Maligna; and it was also for a long time designated as the "Fatherguell sore throat." But now happily, we have the three forms of scarlatina beautifully arranged under one head the identity of which can, no longer be doubted.

The only difficulty, that now seems to

exist, is to distinguish it from Measles, however, in my opinion, there is nothing to prevent us from making a correct diagnosis in almost, if not in every case.

In Rubeola we have the disease commencing from the very onset, with prominent catarrhal symptoms; there is a flow of thin liquid substance from the eyes, and nose; cough, coryza and slight dyspnoea, before there is any appearance of any rash whatever. Whereas in mild Scarlatina this is seldom, or never the case, we may it is very true sometimes have a slight deflux from the nose, but never in any case untill the eruption has come out. The affection of the throat gives also prominent symptoms to Scarlatina, but in Rubeola there is no sensation of disease felt by the patient in these parts. Again.

The character of the eruption itself is often, if not at all times, sufficient to mark distinctly the nature of the disease, the

characteristic of difference between the rash of Rubeola and Scarlatina is always strikingly different; both as regards the appearance of the Eruption when out, and the time of its appearing upon the surface: the rash in Scarlatina generally comes out within the first 48 hours; in Measles it never appears until the third day and still more frequently not until the fourth day: the rash, too in Measles, is more elevated, composed of small circular dots, appearing like flea bites, and generally in clusters, not so regular as in Scarlet=fever; in the latter the rash is more ~~elevated~~ irregular diffused over the whole surface, or sometimes assuming the appearances of broad patches of intermediate shape whereas in the former, it is scattered appearing in patches, assuming an irregular crescentic shape; the colour of the rash differs in a great degree also; in Scarlatina it is of a livid red, resembling the skin of a boiled

of a boiled lobster: in measles it is of a dark hue, the patient looking as if he were smeared over with the juice of raspberry; in the former the redness commences in minute points, which quickly increase and coalesce rather, so that they give to the surface an uniform redness; in the latter the papulæ are merely seen in clusters, having portions of healthy skin intervening; and lastly the sequelæ of Rubeola are generally the affections of the respiratory organs; those of Scarlatina are, anasarca, desquamations in the joints, inflamations of serous membranes &c &c &c.

Prognosis

The prognosis of the disease under consideration must as a matter of course, be exceedingly various; as the affection appears with various forms, from the least dangerous to the most fatal of maladies. In the simple form little danger is to be feared from the complaint itself; the only danger is, in case secondary affections may be set up. But however simple the disease may be when it first sets in

we cannot be too cautious in giving our ~~diagnosis~~ prognosis: for we must remember the disease is often very fallacious, particularly in Epidemics. In Scarlatina Maligna anginosa our prognosis is to be formed from the degree and extent of inflammation present. Great tumefaction of the throat and surrounding parts with the inflammation extending to the air tubes; the mucous membrane presenting a dark livid or brownish aspect are generally fatal indications. Some think the danger does not ~~depend~~ arise from the throat, but "depends almost entirely upon internal obnoxious congestion and visceral disorganization" this may be the case, but certainly when there is much complication of the throat, danger is almost always feared. Oedema of the glottis is also an unfavourable symptom. Early delirium not unfrequently carries off the patient in a few hours, particularly children. From the appearance of the efflorescence we may often form a pretty correct diagnosis; a pale or darkly red eruption is ceteris paribus more dangerous

than when it is bright and uniform, and when the eruption is of a strawberry tint, it is said to be an unfavourable symptom, when it appears and disappears, and also when it comes out in patches on different parts of the surface are also symptoms indicating some degree of danger; a too sudden disappearance of the rash, is also an omen, from which much mischief is to be expected." When the fauces become considerably tumified, accompanied with painful swelling of a bright red ~~colour~~ colour; the prognosis is better than when the parts are dark and livid without swelling, and difficult deglutition" When the ulcers take on a foul look, more danger is to be apprehended than when they assume that gray ash coloured aspect. The superventions of gangrenous ulceration ~~may~~ is truly an occurrence much to be dreaded; these ulcerations may appear on parts subjected to pressure, and they may often be found on the extremities. A quick and hurried respiration frequent pulse accompanied with great debility; bloody urine and stools, and acrid ~~defluxy~~ deflux from the eyes nose: Muttering

delirium and coma are all symptoms indicating the highest degree of danger. Finally when there is regular abatement of the febrile symptoms - the pulse becoming calm; healthy granulations of the ulcers, disgranulation of the cuticle a speedy and happy termination may be expected

Treatment.

In the simple form of this disease, nothing more is required save a simple and unexcitating diet, gentle and cooling purgatives, or in a word the observance of the antiphlogistic regimen, carefully watch the progress of the disease, and above all we must not be too officious, for often the simple form will do very well without any assistance whatever

In the malignant variety our treatment differs as the grade and violence of the disease is more ~~important~~ defining so the treatment must also be one of a more active nature keep the bowels well open, and should there be much derangement about the thoral, the application of a few leeches will often do much good, which will relieve in some measure the head symptoms. Should the arterial excitement attain a high pitch

of violence with much acclamation, blood should be cautiously taken from the arm; and when the skin is hot and dry we may use cold effusions or cold ~~and~~ tepid sponging. We are indeed exhorted by many able practitioners to make free use of cold applications in scarlatina, the most happy effects are known to have risen from its judicious employment; the change is said to be almost magic; pulse becomes calm; the expression of the patient less distressing; thirst less urgent; skin moist and cool, and then a gentle perspiration breaks out; and the little patient falls into quiet and refreshing slumber. When the febrile symptoms become very violent - we are recommended to employ cold by dashing cold water against the patient, or if this be objected to we may gain every advantage from frequent sponging every hour or two during the day. Ice to the head will also do some good.

When our case begins to sink under the depressing symptoms of scarlatina Malignea all

our efforts will too often disappointing, for truly the most deadly plagues are not more fatal than this violent typhoid grade. Still however we must not despond, and leave our almost hopeless patient to the care of nature alone; we may, and often can give a best deal of assistance, when the seems little hope. If the patient is beginning to sink, we must make free use of stimulants and tonics. Wine seems to be our best remedy "in sustaining the flagging powers of the system" until we see some change for the better. Quinia may also be used in conjunction with wine.

The sesquicarbonate of Ammonia is also recommended by some, but wine appears to more useful if not more useful at least oftener recommended.

By carefully attending to the state of the throat we are often able to do much good by the application of local means. When on looking into the cavity of the mouth and upon the parts around, are gangrenous ulcers, or little ashed colloured sloughs upon the tongue, we should make free use

of gargles. The chlorate of soda or the bitter of lime will form as good applications as we can approve. In ordinary cases we may take two ounces of the common solution of soda to a pint of water, but we must always make our wash in proportion to the virulence of the throat if they are severe we must make it strong, at least so strong that its application may cause a little smarting. We must through the whole course of the disease keep the bowels moderately lose, with cooling drugs, saline purgatives are of course always recommended. Through the whole course of the disease we must carefully watch the local affections, and should any arise, we must treat them according to their nature and severity.

An Inaugural Dissertation
On the
Injurious & pernicious
effects of Alcohol on the human
System

Submitted to the Provost
Regents and Faculty of the
University
of Maryland
for the
Degree
of
Doctor of Medicine

By
Daniel Keller

A Dissertation. On the Injurious and pernicious effects of Alcoholic drinks on the human System.

In presenting this I shall endeavor to explain some of the laws which govern the influence of the body upon the mind, and of the mind on the body, showing what conditions of either induce and cause those of the other and point out the consequences or penalties attached to the violation of these laws and also show the effects of Alcohol or intoxicating drinks of every kind and degree upon the mental and Physical economy violating these laws and thus inducing their penalties. First by stimulating the body, and thereby the merely animal nature of man and weakening his moral and intellectual powers and by shortening human life. That there exist reciprocal relations between the body and the mind, each influencing and being influenced by that of the other, for we are composed of mind and body so closely united by the reciprocal action by certain Physiological laws, that the

condition of each have a perfectly reciprocal and powerful influence upon the states of the other, each throwing the other in a corresponding state. Physical inaction induces mental sluggishness, whilst a few degrees of exercise or labor clears the mental horizon of those clouds with which confinement or sluggishness envelopes it, producing a delightfull flow of thought and feeling. Sickness enfeebles and health strengthens the mind. That these relations between body and mind are governed by certain invariable laws of cause and effect, given conditions of the one inducing and causing the corresponding states of the other. The principle that whenever a part of a given class of phenomena are governed by laws of cause and effect, every phenomenon of that class is governed by those same laws is a universal principle of nature and may be relied upon in every conceivable application. Are a few bodily motions caused by muscular contractions all are caused by the same contraction. That some of these relations existing between

mind and body are governed by laws of cause & effect is self-evident. Either there must no relations of cause and effect between the two or else it is all cause and effect all antecedent and consequent for nature always makes thoroughly work or does nothing. Hence we can at any time throw either mind or body into any desired state by putting the other into its corresponding and we can no more put either into any given state without thereby throwing the other into its corresponding one) than we can arrest the operation of any other law of nature. And since the brain is the instrument of thought and feeling, its condition influences the mind more powerfully than those of all the other portions of the body united, to excite either faculty or organ is to excite the other, and as the stomach and brain are intimately related its state also powerfully influences that of the mind. See reference to the several parts of the body. As an organized being man is composed of three principal classes of organs

The vital or nutritive apparatus, namely the heart, lungs, blood digestive apparatus, embracing the entire system of inside organs, which manufacture vitality furnish animal vigor and repupply the brain, nerves, and muscles with that vital energy which their every action compels them to expend. The locomotive apparatus embracing the bones &c, which constitute the frame work of the system gives it size and shape, and produces bodily motion physical strength &c, and thirdly the brain and nervous system, the exercises of which produces thought, feeling, sensation, nearly every form of physical pain and diseases are caused mainly by the deficient or excessive action of one or more of these functions.

When these are all well developed & equally ballanced, there will be an abundant supply of vital energy to keep the animal economy in motion a proportionate supply of physical strength, love of exercise, and ability to labor, together with lively sensibilities, intensities of feeling, and

power of thought, the result of which will be good health, long life, physical enjoyment in the highest degree of which our nature is susceptible and a high order of natural talent. This developement not only is perfectly adapted to the laws of nature and harmonizes with the constitution of the human mind, but also gives what is called sound common sense, correct judgement, and enlarged views of subjects, whilst its absence causes the intellectual lameness, the fallacious and diversified opinions existing among mankind. Having therefore given a few general remarks we will now go on and endeavor to show how Alcoholic drinks effect and to some extent injure the healthy functions in the human system that when taken into the system where every organ is performing its healthy function there is not the least doubt of its being injurious and bringing nature out of the regular course as well as corrupting the moral faculties. For alcohol not only stimulates the brain and

nervous system but it even burns the mouth and irritates the lining membrane of the first passages, when it reaches the stomach it passes in part unchanged by absorption through the abdominal or portal circulation to that highly important organ the liver which it morbidly excites or inflames, it also impresses the lining membrane of the stomach, duodenum, and by contiguous and continuous sympathy up the ductus communis choledochus & through the hepatic duct into the substance of the liver and by over exciting and stimulating that organ it soon becomes morbidly deranged and in immoderate drinkers we frequently find dropsical effusions as well as diseases of the urinary organs &c. The exciting properties of alcohol appear to be retained for some considerable length of time after they are taken into the system, this I think is evinced by the stimulus and increased action which it but temporarily appears to impart

to the whole animal economy. It is supposed indeed believed beyond all doubt that it passes unchanged into the blood having the same effects on the living parts with which it comes in contact in the system that it has when applied to the surface. It has been extracted from the blood by chemical analysis, and found in the watery secretions of the brain of drunkards after death, and in some cases in such abundance as to send forth the strong alcoholic smell. The question has frequently been put or asked is alcohol digestible, and in reply our most eminent Physicians have always answered in the negative. And again the blood thus surcharged with this stimulant powerful as it really is, with propriety might say this deadly poison for such it has been proved to be, is brought into direct contact with every part and particle of the entire system, with every shred of every nerve, and with every fibre of every muscle

The ramifications of its vessels being almost inconceivably minute and numerous. The blood therefore is indeed the life thereof. As is the state of the blood, so is that of the whole system in general, and of the brain and mind in particular. The same may be said is also substantially true of the stomach. Its condition powerfully affects that of the great sympathetic nerve, which in its turn influences the entire system and more especially the base of the brain. It is supposed that about one seventh (as near as I recollect) part of the blood of the whole system is sent to the head, which is considerable more in proportion to its size, than is carried to any other portion of the human system. This I think is the universal testimony of all eminent Physiologists. The reason must (at least to every intelligent man of the medical profession) be obvious. By a law of the animal economy, every action of every nerve and muscle every exercise of the brain or mind, causes a proportionate expenditure of vital energy. The blood being the great medium for resupplying this

exhausted vital energy, is most abundant when the greatest rapidity is demanded. Hence, since the brain is the organ of the mind, and the irritating effect of alcohol is most powerful, its exciting properties are retained for some considerable length of time after taken into the blood, and being there is a much greater proportion of blood sent or circulating to the head than to any other part of the system. The injurious effects of alcohol upon the mind of man must be ~~[illegible]~~ most powerful & tremendous. However extraordinary man is as a merely Physical being, it is his intellectual and moral qualities which constitutes the Chief end of his existence. He never was made merely to eat & sleep, to breathe and labor and die. He was created mainly to think and feel, to adore his Creator and to study his works. It is not the frail body, but it is the intellectual and moral nature which constitutes the manhood of man, all else is not worth any thing. It is our minds our moral capabilities our powers of thought and feeling, which consitite our very essence and substance our personality

and identity, flesh and blood being dwelling only. Hence the exercise of mind is more fatiguing, more painful, more pleasurable than that of the body. Therefore the effects of alcohol are had in the very highest degree possible or imaginable, and bad upon the very essence and soul of man.
Again by a law of the animal economy to over tax any organ detracts the influence from the other portions, and concentrates it upon the laboring part. for instance an overloaded stomach draws the strength and energy from the brain, from the muscles, from every other part, to remove the load, rendering us drowsy dull and averse to both mental and physical action close mental application, powerful thinking and intense emotion impair the appetite retard digestion, and frequently induce dyspsia, because they draw of the energies of the system to the brain. Now if this well established physiological principle applies to the several portions of the brain this prodigious

incitement of the animal passions actually weakens the intellectual and moral organs, and that at the very time when, in order to keep pace with the overstimulated animal propensities, thus lashed up to the highest pitch of action they require to be clothed with unusual vigor. In case alcoholic liquors excited each of the faculties alike, why do they not render the pious man more so, why are not all spirit drinkers patterns of piety and good morals, and also stars in the firmament of intellectual greatness. Not only does it not augment the talents of the talented men, nor the literature of the literary, nor make the profane pious, but it actually reverses this state of things. It prostitutes talent, beclouds the intellect, and before its approach of literary attainments, intellectual greatness, and moral purity one and all vanish like the dew before the rising sun. It sometimes, though rarely a certain kind of so called eloquence. whilst it is a sworn

enemy universally to good morals and to all literary and intellectual attainments These assertions are perhaps rather too sweeping but too true on the other hand so innumerable illustrations might be given. The inference then becomes obvious and powerful and inevitable That alcoholic drinks of every kind and degree by stimulating the human system thereby powerfully excite merely the animal nature of Man, and weaken his moral and intellectual powers The very conditions which constitute a brute No more can any human being take alcoholic liquors in any form and degree, without proportionally inducing this result, without thereby brutalizing his nature without degrading his manhood. As soon will the deadly poison become harmless or the water slide up an inclined plain of itself, as alcoholic stimulants fail to produce immorality and to weaken the moral feelings. nor is there any middle or moderate ground every identical drop of alcohol has its legitimate

its stimulating effect on the nerves, and through them on the organs of the animal propensities. As far as it goes at, just so far it goes towards making a man a brute. The greater any gift or blessing is, the worse it becomes when perverted; as reason God's crowning gift to man, when perverted becomes a proportional instrument of evil and misery; man thus brutalized, becomes vastly lower than a brute and more miserable. Be it understood that whatever contains alcohol be it the alcoholic drinks, such as Rum, Gin, Brandy, Whisky, or any of the wines both foreign and domestic or malt liquors, strong beer, ale, porter, hard cider, one and all every thing containing alcohol in any form or degree, is productive of this result in just that proportion in which it contains this powerful stimulant, this we repeat it deadly poison, for it is the stimulating property that does the mischief. Therefore whoever drinks alcoholic stimulants in any form or degree, arouses his animal passions, and weakens his moral and intellectual powers in proportion to the amount taken in the

System

This principle harmonizes with and fully explains the Phenomena of drunkenness. Beyond all question and in all instances, drunkenness certainly destroys the moral feelings, and weakens the intellect, whilst moderate drinking lowers them in proportion. That alcoholic drinks excite the animal propensities is a universal fact the vulgarity & obscenity & licentiousness are proverbial with those who drink, who ever saw a drinking party that were not indecent in their allusions, given to the relation of obscene anecdotes, and singing of lewd songs. They drown the voice of conscience, blunt modesty, stifle the claims of morality, of intellect & of all that is virtuous. It is seldom that men fight unless excited by liquor. Byron says that stimulants always rendered him savage and suspicious More murders are committed through the influence of ardent spirit than by all other causes combined. The calendars of crime do testify on this point. It is the excessive exercise of the animal propensities which subjects criminals to the penalties of violated civil law. It is by drinkers that our courts are supported, does not most if not nearly all our criminal business have its origin in drinking But in case alcoholic drinks did not excite the merely

animal passions or in case they equally stimulate the moral faculties, or especially if they stimulated the moral sentiments only, this state of things would be reversed and drinking would render mankind more virtuous instead of more vicious. This principle explains the fact that alcohol often renders a good man a real demon incarnate. So long as the moral and intellectual organs predominate, no matter if the animal propensities are vigorous if duly governed the more the better, for they impart force. When the two are about equal, with the moral in the ascendancy, and the animal not stimulated all goes right, but a little stimulant will turn the scales and thus render a good man a very bad one, it never renders a bad man a good citizen, nor an immoral man virtuous, because it never stimulates the moral & intellectual faculties more than the animal feelings. Again overexcitement produces that confusion which prevents the advantageous exercise of mental powers and by surcharging both the muscles and the brain with excitement, prevents the even, equable, harmonious and advantageous expenditure of that strength both mental and physical, which is thus

unnaturally called forth. A depraved appetite inflames and diseases the stomach; this corrupts and inflames the blood which, by fevering and exciting the body thereby stimulates the animal propensities and weakens the moral and reasoning powers. This is particularly true of Alcoholic drinks. These drinks are sometimes taken to drown sorrow or trouble but we see that they are particularly calculated to augment it, except that of a guilty conscience which they indeed do drown. Having endeavored to show that alcoholic drinks produce vice by stimulating the animal, and weakening our higher, noble powers: we reverse the principle and observe that they cause vice and misery, by paralizing these organs. Alcoholic drinks shorten human life, every action of either brain or nerve, every exercise of thought or feeling or sensation, every motion of the body, every contraction of every muscle, in every function & exercise of the animal or mental economy causes a proportionate expenditure of that animal power, that vital energy already shown is manufactured by the internal organs Alcoholic drinks therefore shorten

human life by destroying the healthy equilibrium which is so indispensable to the preservation of life and health. The one great end of mans existence is enjoyment as is evinced by every contrivance of his body, every faculty of his mind these stimulants abridge his enjoyments by disturbing the equable harmonious exercise of both his physical and his intellectual powers and by violating every condition of happiness. The principle is universally conceded and enforced in all our medical works that the violent exercise of the passions is not only a sworn enemy to health and physical and mental enjoyment, but also shortens the days of the passionate man. Having already shown that intoxicating drinks stimulate the animal passions to an ungovernable extent, and weaken the powers that control them, the inference is plain and forcible that they thereby consume the life of man. Alcoholic drinks also shorten human life by the many diseases and accidents, either directly or indirectly which they are the principal causes such as dropsy, Mania potu, Hepatitis, & diseases of the the urinary apparatus.

An

Inaugural Dissertation

On

Intermittent Fever

Submitted to the examination of the Provost

Regents and Faculty of Medicine

Of the

University of Maryland

for the

Degree of Doctor in Medicine

By W. V. Ward

To

The Professors of Physic

of the

University of Maryland

Gent;

It affords me great pleasure in dedicating this essay to you, to offer my grateful acknowledgements for the efficient encouragement which you have given to me in the prosecution of my professional studies during the very able course of lectures recently delivered in your halls and the kind courtesy which you have uniformly extended to me during our brief and on my part pleasant acquaintance

That your lives rendered valuable by talents of no ordinary order, by kind and generous feelings made valuable in mitigating the ills incident to humanity may be long preserved is the sincere desire of

Your obliged friend

O. A. Ward

Intermittent Fever

In reviewing the names of those who have shed so much lustre upon our science, and its kindred branches, and who have so signally failed, to give us any correct or definite information of the true nature of malaria, which is the term used to express the cause of this disease, we are invariably led to the conclusion that their failure was owing either to their manner of investigation, or that the causes were too subtle, to be detected by any of the delicate tests which the ingenuity of man had hitherto devised — The latter is probably correct, for we can hardly suppose that men, who were distinguished for their acumen, and astuteness of research in the arcanes of science, would have so signally failed, could the causes have been made cognizable to us, by any of the delicate tests, which they had at command — Science has made rapid strides within the last quarter of a century, and her progress is still onward — A new era has dawned, a greater impulse and vigor seem to have been imparted to the human mind, that impulse, has

has been felt, and the fruits, are being made manifest not in our science only, but, in all other sciences which tend to increase, the ~~[illegible]~~ happiness of mankind. It is to be hoped that the day is not far distant, when all, or at least a greater part, of the phenomena, of the nature, and exciting, and predisposing causes of this disease remote, and proximate, can be fully explained. It is possible, that by means of powerful microscopes, something may be discovered, which will shed some light upon the true nature of malaria, "Chemical analyses have hitherto failed, notwithstanding, the greatest care was used in the manipulations. This is a subject which is fraught with the deepest interest to mankind, near two thirds, of the habitable globe, being scourged by the diseases which it produces. this number and sequalae, may well be called "legion," and the lesions of innervation, and nutrition which tend to cut short the sum of human life are incredible.

It seem to us from observation, and the investigations of scientific men, that a necessary quantity of moisture, and a rather elevated temperature, which shall continue for some time acting upon decayed vegetation will

produce malaria or bad air as it has been termed which is the immediately predisposing and exciting cause of intermittent fever — The views which have been recently advanced from an eminent source, that vegetable decomposition, is not necessary, to produce malaria, and that the peculiar poison, may abound where there is decaying, or decayed remains of vegetation, are somewhat novel they require more correct observation and a greater amount of facts to confirm them before they can be received or entitled to any weight — We design to confine ourselves to the treatment of intermittent fever our limits, and time, forbid an elaborate investigation and discussion of the various theories which have been at different times advanced of its producing causes, or an exposition of our own views — We may define intermittent fever, as a primitive or essential fever, composed of many paroxysms, which recur at regular intervals, between which, we have a state of apyrexia or freedom from fever — This definition will apply in a majority of cases, it is still to a certain degree defective or imperfect for we meet with examples, in

which the periods of attack are by no means regular and the state of apyrexia incomplete.

An attack of intermittent fever is most usually preceded for several days by a general feeling of malaise and disorder of the secretions, the tongue being clammy and slightly coated, digestion is more or less impaired, the fecal matter being either too hard or light colored and wanting in consistency - - -

The symptoms immediately preceding and ushering in an attack are a sensation of weakness and distress about the epigastrium, general debility languor listlessness and inability to make any physical or mental exertion - The patient begins to yawn and stretch, he soon begins to have horripitations the sensation being first felt at the extremities, then along the spine, the capillary circulation becomes more and more feeble which is evidenced by the shrunken extremities and the dry and rough skin - In a short time the slight and transient feeling of cold first felt becomes more decided and general the patient feels cold being usually huddled or drawn upon himself he trembles and shakes his

with chatter the rigors are often so intense that the bed is violently shaken – He complains of great cold along the spine (often comparing the sensation to a stream of cold water poured down the back) and of great aching and a sense of weight in the lumbar region and extremities particularly the knees, his nose is pinched and blue, his thirst is oftentimes urgent, respiration is hurried and anxious, pulse small, frequent but firm, most of the secretions are diminished, the quantity of urine is seldom scanty, being sometimes increased, it is however pale and aqueous ... After these symptoms have lasted for a greater or less length of time (being modified by the type) they are succeeded by cold shivering with alternate flushes of heat by and by the shivering ceases entirely and is succeeded by a general feeling of warmth, the previously shrunken extremities and the whole surface assume their ordinary bulk and appearance ..... But the reaction does not cease here, the face now becomes florid and turgid the whole surface of the body becomes hot and dry the temporal arteries throb violently often attended with intense

head-ache the pain being usually severe to the frontal region the thirst is very urgent the pulse becomes strong full and rapid; respiration is deep and oppressed: urine scanty and high coloured but not depositing any sediment, or if any it is principally mucus; the patient exhibits great restlessness and tosses himself to and fro in bed ... When symptoms subside in the course of two or three hours sometimes in an hour, a slight and gentle moisture makes its appearance on the fore-head, face and neck which is gradually diffused over the whole of the body affording great relief ... The thirst abates, the urine becomes more plentiful but high coloured and depositing a lateritious sediment upon cooling the tongue is less clammy but covered with a slight yellow furr; the pulse returns to its normal standard in force and frequency, the pains disappear, the sweating ceases, having the patient comparatively well ... He is usually able to resume his ordinary duties though a feeling of lassitude and weariness still exists; the countenance is pale and sickly, the physical and mental powers are excited with difficulty, the appetite is variable, digestion being

imperfectly carried on owing to the derangement of the chylo-poietic apparatus .....

In a great many cases there is during the cold stage a lesion of one or more of the internal organs (it is however not always perceptible), and congestion of many if not all of the viscera of the three great cavities we have (if we may be permitted the expression) a state of hyperemia of the internal and anemia of the external parts or differently expressed the balance of the circulation is lost the blood forsakes the surface and accumulates in the internal organs. This hyperemia from the frequency of its repetition or excessive violence affecting these organs which are weak by congenital proclivity or some other cause may be productive of an inflammatory state of these organs and the lesions thus produced may become sources of irritation, react upon the system and thus be a powerful means of keeping up disease. ..... That this hyperemia does exist is undoubtedly true, so far as signs and symptoms prove any-thing, first let us examine the head: we find there, more or less a sense of tension and

fulness; the patient complains of head ache the sensibility is diminished and there is frequently stupor and coma. Next the Chest; the face is livid, respiration is hurried anxious and attended with some cough and upon percussing the chest we find dulness of sound and other physical signs of congestion and upon dissection we find the lung congested sinking in water and closely bordering upon hepatization. And lastly the Abdomen; we have nausea and vomiting, often diarrhoea and a copious discharge of urine, the skin is pale and shriveled, the bulk of the extremities diminished and countenance collapsed. All of these appearances lead us to believe that there is great internal congestion and which the scalpel corroborates. The effects of congestion are two-fold, we may have congestion either with or without organic lesions and inflammation. In some cases the congestion is followed by violent inflammations, in others we have chronic inflammations produced. Persons laboring under asthenic plethora are predisposed to serious congestions, there is in them a great want of contractility of the moving fibre, the heart and arteries and other organs instead of being

Stimulated by the increased quantity of blood are oppressed by its load ... The pulse may be full but it is slow, sometimes irregular, there is frequently a disposition to faintness, alternating with palpitations and physical examination shows the heart to be enlarged by the accumulation of its contents .. The face is more purple than red, the veins are generally distended, the extremities are apt to become cold, the other functions are sluggish and imperfectly performed; the bowels are costive; urine high colored or turbid, sensibility is blunted and the mental faculties are dull ..... Asthenic plethora affects those especially who are weakened by age, excesses or previous disease, and those in whom the excreting organs act imperfectly, which imperfect action is a cause as well as an effect of plethora; congestion of the brain or any other organ the vessels of which are weak is first produced -- It must be borne in mind that when congestion lasts long it may weaken the vessels by over distension but after the cause has ceased to operate it does not subside. The morbific poison acting upon persons who have either sthenic or asthenic plethora often acts insidiously,

affecting most usually those organs which are weak by congenital proclivity or any other cause and one or more of the viscera are thus so much weakened that they are likely to suffer serious lesions whenever an attack of intermittent fever supervenes; their secretions are gradually diminished or arrested, evidently shewing the insidious-ness of the morbific poison.

Intermittents have been divided into quotidians, tertians, quartans and quintans, all or any of which may be com-plicated by being double.

An ague is divided into three stages the cold, the hot, and the sweating stages.

The first variety, quotidians, is characterized by having an apyrexia or intermission every twenty four hours and when uncomplicated the apyrexia is com-plete but short and the paroxysm is long, frequently continuing ten or ~~twelve~~ hours; if the succeeding paroxysm commences earlier, it is said to be ant-icipating and it is considered unfavorable in this as well as in the succeeding varieties because the dis-ease is about to assume a graver form, usually the remittent.

The second variety, tertians, is known by the recurrence of the paroxysms every forty eight hours, the paroxysms usually commence about noon and continue some five or six hours - ... This is by far the most usual variety; there is more languor and a greater sense of weariness in this than in the preceding variety, more or less nausea is felt during the cold stage and which continues throughout a greater part of the succeeding stage, the cold stage lasts about an hour and the hot some three or four hours being disproportionably long ..... This variety is sometimes doubled and occasionally trebled or differently expressed two or three paroxysms occur in the course of forty eight hours; for instance, a patient will have two paroxysms the first day, the first occuring in the morning, the second in the afternoon; on the second he will be exempt but on the third the same symptoms will recur ---... Sometimes the paroxysms occur every day, simulating in that respect the quotidian, but marked by this difference, the alternate paroxysms are similar while those which

follow each other are not . . . . . .

The third variety, quartans, is distinguished by the recurrence of the paroxysms every seventy two hours, they are more rare than the preceding varieties and when they do occur it is in the fall and most usually attack the old, nervous and melancholic . . . . . .

The last division, quintans, are exceedingly rare the paroxysms recur every fifth day or after ninety six hours intermission . . . . . .

Quotidians when uncomplicated by organic lesions, appear to complete their course on the seventh day, the tertians by the fourteenth day, and quartans usually run six weeks . . . . . .

During an epidemic of intermittent fever we frequently see cases in which there is an extraordinary regularity in the access, duration, and intermission of the paroxysms, while in others we find them irregular as to the time of invasion, phenomena of the various stages, period of subsidence, and apyrexia . . . We occasionally meet with cases in which the patient complains of pain in one eye with violent throbbing of the temporal

ultery of the same side, which continues for some time and passes off with or without perspiration; the pain recurs at regular intervals; again we find pain in the diaphragm, in a particular set of muscles, vertigo and even odontalgia sometimes assume the intermittent form .....

Intermittent fever has usually a period of incubation or in other words some time elapses from the time of exposure until the morbid effects become manifest the vis conservatrix seems to be alive to the exciting causes and if the person who has been exposed continues in the enjoyment of good health, it is generally competent to resist the morbific effects of the poison ... But if within a reasonable time say a few days or weeks the powers of vital resistance be lessened by cold long abstinence or any other depressing causes, then the poison acts and the disease begins .. That this is true every day's observation and experience prove; for instance several persons are exposed to the poison Malaria perhaps by spending a few hours at night in a malarious district: they return to a healthy location and feel no ill effects

from this exposure until some depressing causes act so as to lower the powers of vital resistance; as being exposed for hours to a heavy rain, long abstinence or sudden change from a rich and generous diet to a meagre one, privation from accustomed stimuli, long night vigils, great mental anxiety, and the loss of a great quantity of blood, when his medicatrix naturae is no longer capable of resisting the morbific effects and the disease manifests itself .....

The most frequent complication of intermittent fever is what is called the gastric; it most usually occurs in the fall, the patient has the ordinary premonitory symptoms: for several days before the attack sensiness his secretions are not healthy or regular, his tongue is clammy and covered with a yellow coat and he has a bitter taste in the morning ... After these symptoms for a greater or less length of time the attack is ushered in with a short rigor in which there is great nausea and vomiting; during the next stage the thirst is very urgent there is great fulness about the epigastrium, accompanied with pain upon pressure and an increase of heat is felt by placing the hand upon the epigastric

region, the tongue is seen upon the tip and edges and is covered with a brown coat or fur which is flakish or with elevated papillae .... The pulse is weak and small but incompressible, urine is scanty and high colored; the bowels are sluggish, the skin is hot and dry with intense head-ache— and great pain and a sense of weight in the lumbar region ..... The vomiting affords but temporary relief ..... The congestion or inflamation produces contraction and wrinkling of the mucous membrane ecchymosis and various degrees of redness of the different parts .....

The next most usual complication is the cerebral, being congestion and inflammation of the arachnoid membrane the premonitory symptoms are a fulness in the head, caused by ~~an~~ determination of blood to the brain which is increased by stooping and violent exercise. When the attack supervenes the patient is seized with rigors, lancinating pain is felt in the frontal region, violent throbbing of the temporal arteries, the eyes are red and suffused, respiration is hurried and laborious. After the rigor passes off the respiration is slow, deep and laborious, the pulse at first is full and

and firm, becomes small tense and sometimes intermittent, delirium and comas frequently supervene; vomiting in the initial stage is not unusual

The other complications will not be described; they can be detected by those who are familiar with pathology and semeiology; our space and time will not permit us to dilate upon them — ...

Diagnosis ... We have no distinctive features or rather symptoms during the second stage by which to distinguish intermittent from remittent fever, the fever being essentially similar should it pass off within two or three hours and be succeeded by copious perspiration we may very safely pronounce it to be a case of intermittent fever ... It is however not always easy to diagnose correctly especially in the southern and western states when the miasmatic poison is very active and concentrated and when complications and lesions of a serious character are frequently met with. When one can ascertain the previous habits of one's patient and know that he has been exposed to malaria it is not then so difficult as it would otherwise be .....

should he not however be able at once to pronounce it to be a case of intermittent fever owing to the lesions which shall have been produced in either of the three great cavities, it will not or at least ought not to prevent him from administering the appropriate remedies. A few hours are often of immense importance, so much mischief may have been done by the delay that our skill will prove in vain; it will not do to wait for the access of another paroxysm before we commence treatment. The local lesions tend to keep up a state of febrile reaction and prevent complete apyrexia or intermission.

Prognosis. In the virulent cases of intermittent, occuring wherever the morbific poison is very active and concentrated, as it is in our Southern and Western States, death frequently supervenes after the access of the first paroxysm and more frequently after the second, produced by the intense congestions and lesions of vital organs. In such cases the scalpel shows the vessels of the brain deeply engorged, effusion

of serum or blood upon the arachnoid, the sinuses distended and frequently effusion on the ventricles of the brain. the lungs present intense engorgement, being so much congested as to border on hepatization and do not float upon the surface of water; the liver and spleen are considerably enlarged from the accumulation of blood in their parenchyma. the mucous coat of the stomach and intestines is also engorged having lost its natural hue and exhibiting various degrees of congestion and color ..... But in the ordinary cases of intermittent, death rarely supervenes; the tendency is to spontaneous cure, especially if the patients remove to a healthy location; where the patient remains where the morbific poison is continually acting and no treatment is given the disease often proceeds for months. In these cases enlargement of the liver and spleen with induration produced by the continued action of the poison and the congestions during the cold stage are frequently met with; also general derangement of the chylo-poietic apparatus

and functional and organic lesions of the heart attended by general anemia. .....

Treatment.. In the gastric complications of intermittent fever, it will be proper to bleed freely from the arm, to apply leaches over the epigastrium and after their removal to apply warm fomentations so as to produce a free flow of blood from the bites; it is astonishing how much relief is often afforded by the loss of only a few ounces of blood from the epigastric region all of the symptoms abate: the thirst becomes less urgent and the pulse becomes softer and more full... Cups ought never to be used over the epigastrium; their application often inflicts pain and increases the irritation of the Stomach. We should administer iced water and small lumps of ice internally; they allay the thirst and nausea and act as a contra-stimulants and sedatives; the bowels should be opened by enemata and Calomel and opium given to act upon the secretions and bring them to the normal standard &c &c &c &c ....

In the cerebral complication rigorous antiphogistic treatment must be persevered, in general and local blood-letting and this repeated as often as it may become necessary. The head of the patient should be kept elevated so as to take advantage of the laws of gravity; the room should be dark and cool and as quiet as practicable and no persons other than his usual attendants allowed to enter the patients room — Bladders filled with pounded ice should be placed on the head ice materially contributing to counteract and control the determination of blood to the brain; to effect this object the ice should be kept applied until the inflammation is subdued for if applied for a short time only the very evil sought to be prevented is increased We know the effect of plunging the hand into ice water for a few moments is to cause, very considerable reaction, determination of blood and a sense of heat and fullness. Drastic cathartics such as calomel and jallap in full doses should be exhibited and followed by saline purgatives If alvine evacuations cannot be produced by any of the ordinary cathartics (as is sometimes the case) one should administer a —

full dose of Castor oil combined with a large tea spoonful of Ol terebinth" and repeat it if necessary. I have never seen this combination fail to produce full and free evacuations; it seems to act powerfully upon the muscular coat of the intestines and increasing its contractility thereby increasing their peristaltic action. Warm applications and Sinapisms must be put to the feet so as to produce a greater flow of blood to the extremities: Cups and after the inflammation and general momentum of the circulation have been controlled, blisters to the nucha are highly important and beneficial &c &c &c &c &c

The various other complications must be treated upon general principles; subdue the local inflammations by antiphlogistic treatment &c &c

If we are called to see a patient who has had two or three paroxysms and find that at an early period there was complete apyrexia but that this is no longer the case the great probability is that some visceral organic lesion keeps up the fever the usual period of intermissions. We must now

to a rigid examination of the viscera. Observe whether there be head-ache — stupor or lesion of intellect, any derangement of sensibility, any throbbing of the vessels of head or neck. We should now examine the chest and thoroughly investigate its condition, use the stethoscope and percussion, ascertain whether there be dulness of sound and the usual physical signs of lesion of the lungs. Then proceed to the abdomen examine whether it be flat or prominent and full and if it be tender upon pressure and note carefully the condition of the liver and spleen — We now have an important question to determine. Does visceral lesion necessarily contra-indicate the use of quinine? It does not if the lesion be recent and slight; in such cases quinine does not produce an injurious effect, but directly the contrary. Some years ago and even now by a great many practitioners it was looked upon as being exceedingly rash to administer quinine during the existence of any lesion of the viscera however slight without previous preparation and a

long array of emetics and cathartics especially mercurials. It was then looked upon as being only a powerful stimulant and as being highly injurious if administered in larger than one or two grain doses but now it has been ascertained to produce a sedative effect if administered in large and full doses; fifty and sixty grains are administered in extreme cases and in some there is a great tolerance of the remedy. Some practitioners administer it during the pyrexia of intermittent and remittent fevers, if there is no serious lesion of any of the internal organs: it cuts short the hot stage and produces perspiration in a much shorter time than any of the ordinary means, under its use the pulse becomes more full and soft, the head-ache diminishes and there is a general abatement of all the symptoms. If there is any thing in medicine which deserves the name of specific, it is quinine. It is generally considered of little consequence in what way quinine is administered. I however prefer administering in solution as a disulphate: it acts more promptly

being more readily absorbed and carried into the circulation. To children it may be administered in the form of an enema as we frequently find great difficulty in inducing them to swallow it in solution or pills: in administering it in the form of an enema dissolve it by using a few drops of sulphuric acid to which add a few drops of laudanum and mix them in two or three ounces of thin starch or mucilage. About double the quantity of an ordinary dose of quinine must be used in this way .....

We usually administer quinine in five grain doses three times a day during the apyrexia and ten grains about three hours before the expected accession of the paroxysm.. There is one effect of quinine which is not only curious but inexplicable: it is this - If we may administer quinine immediately before a paroxysm it will have no apparent effect other perhaps than lengthening the duration of the hot stage but it anticipates or in other language it will prevent the recurrence of another paroxysm.....

Quinine applied endermically is highly spoken of

as being more effective than any other mode I have used it sometimes; it answers remarkably well in cases of a malignant type when we can not use it internally.

Codeine which is the chemical alkaloid and active principle of Cornus Florida a dogwood bark; ranks next to quinine in power and efficacy and should the supply of quinine be greatly diminished from any cause, this may be used as a substitute being made from a tree which is indigenous to our country. Its effects are very similar to that of quinine producing in full doses tinnitus aurium &c.

Salicine the active principle of white willow bark is highly recommended but I have been very much disappointed in its effects; it is extremely apt to cause nausea, retching and vomiting, when administered in full doses to delicate females and others whose digestive apparatus is weak.

Arsenic in the form of Fowler's Solution is a powerful remedy it may be administered with opium and aromatics; it is looked upon as being peculiarly valuable for children on account of its tasteless nap

But there is a very strong objection to its use arising from the danger from the administration of an over dose: it is this, that in a great many cases where arsenic had been employed the patients after their recovery fell into a state of bad health, became weak, emaciated and exhibited remarkable derangement of the digestive organs.. There can be no doubt that it is an agent which is highly injurious to the system and that its continued use is productive of exceedingly injurious results... We should therefore decline its employment whenever we can dispense with it..

Piperine has been looked upon as a very valuable agent in the treatment of intermittent fevers: it is greatly inferior to the oil of black pepper: it answers very well in a great many cases when combined with some tonic and febrifuge....

A combination of Opium, Camphor and carbonate of ammonia, will prevent a paroxysm, and may be safely used if we have no other remedies at hand and during the intermissions, Tonics may be freely given....

Prussian blue (or ferro cyanide of iron) has been recently introduced in the treatment of this disease: it certainly has one recommendation that is its cheapness its febrifugal powers must depend upon the prussic acid which is combined with the iron; the amount of iron which is in the salt would not produce the effects ascribed to it.....

There is a fine tonic and febrifuge which is also used as a phrophylactic in common use in the western States: it is a very strong decoction of dog-wood bark (Cornus Florida) wild cherry (Prunus Virginiana) and white poplar (American Tulip-tifera) boiled down to the consistence of treacle or honey to which some French brandy or good whiskey is added to prevent decomposition, they form a very pleasant tonic bitter which is extremely valuable in malarious districts being so very cheap and so easily procured that the poorest may obtain and use it.....

Emetics are sometimes highly valuable especially when there is much derangement of the chylo-poietic apparatus; they emulge the liver and unload the portal system and cause a determination of blood to the surface &c.

They should be administered during the intermissions and not immediately before the accesp of the paroxysm but after the third stage or sweating has subsided .....

In cases of violent congestion and when the powers of life are too feeble to produce reaction or where its long continuance will probably produce serious lesions the use of the warm foot-bath, warm bricks, or slipes sinapisms to the feet, stomach, and spine, and warm negus & carbonate of ammonia will be required ..... Dr. Mc Intosh is a very strong advocate of venesection ~~of~~ ~~[illegible]~~ ion in the cold stage; he contends that although the phenomena of debility be present blood may be taken with the greatest possible relief in some cases .... My own impression is that bleeding may be performed during the cold stage

without producing death from debility but that the cases in which it is practiced are more inclt adtable and are more likely to assume a graver form, usually the remittent. Suppose however that it is perfectly safe — where is the utility if we can relieve our patient by other means which we know to be safe?

In recapitulation we would briefly state the indications which are to be fulfilled — Remove your patient to a healthy location if possible so soon as his condition will permit for the morbific poison will continue to act and that more powerfully after having had an attack ... If there be any lesions remove them by the appropriate remedies before administering the specific but if the lesions be slight and recent it is not necessary to use that precaution ... You must bear in mind that the prevalent opinion that the tongue is a correct index of the state of the stomach and bowels, is incorrect; if the tongue be foul it should not prevent you from administering quinine for the state of the tongue

is connected with the morbid condition of the whole system and not with the digestive apparatus only. Quinine must be given in full and free doses say five or ten grain doses thrice a day during the apyrexia which must be continued for several days. We frequently advise our patients to take five or ten grains of quinine every seventh day for some weeks after the disease has yielded to treatment, also some preperation of iron or vegetable tonic so as to restore the general tone of the system ---- and to act some what as a phraphylactic ---- We think emetics and mild alterative cathartics when judiciously administered, in derangement of the digestive tube very valuable: they unlock the secretions and relieve the congestion of the portal system and thereby contribute very materially to restore the secretions to their normal standard .....

An
Inaugural Dissertation,
on Necrosis
Submitted to the Examination,
of the
Provost, Regents and Faculty of Physic,
of the
University of Maryland.
for the
Degree of Doctor of Medicine,
by
John Galloway

Baltimore Infirmary Feb 10th 1847

7.

Nathan R. Smith M.D.

Professor of Surgery in the University of Maryland

Sir;

"Gratitude and respect are due from every individual to him, who extends the bounds of that knowledge, so useful to the community. Thousands are acquainted with your endeavours for that noble purpose!" and, here permit me to express the regard I entertain for your talents, learning and judgement, and be assured, Sir, that a recollection of the many valuable and early, instructions given by you; will always recur with the most pleasant associations to

Your Sincere friend &c

John Galloway

In presenting myself before the Faculty of Physic, of the University of Maryland, for the Degree of Doctor of Medicine; it is incumbent upon me to present to the Dean of the Faculty a dissertation on some medical subject; and in doing so I shall be compelled of necessity to lay hold of property common to the profession - the facts and observations as they have been observed and established by its leading members; for facts of my own I have none to give. — I propose to submit to your consideration a dissertation on "Necrosis, the literal meaning of which is "not only mortification but has been confined by the general consent of surgeons to death of bone". There are few topics connected with diseases of the bones, which afford more interest to the Surgeon or general practitioner of Medicine, than Necrosis. whether we regard the facility and frequency of its occurrence, or the various phenomena which attend its progress and termination

This disease may occur at any period of life; but it generally comes on between the fifth and twentieth year, seldom before the fifth but frequently after the twentieth numerous cases have been related of coming on after the latter period of life by authors and two cases out of five that have in the Balt Infr within the past year have been over thirty years — The disease may be partial or entire; simple or com-

-pound; that is it may affect a mere shell, or it may pervade the whole structure of a bone; and again when the disease is simple when limited to one bone, and compound when several are simultaneously attacked". I shall now proceed to consider the causes of the disease, its pathology, the bone most likely to be attacked, its symptoms, diagnosis, prognosis and treatment both local and general.

The causes may be local and general and are not essentially different from those which lead to gangrene of the soft textures; among the local may be enumerated, wounds, contusions, fractures, burns, chemical irritants, matter forming under dense fascia unable to find an outlet; destroys the parts beneath, the nourishing membrane of the bone is destroyed, and the bone dies, as a necessary consequence; examples of this are afforded in cases of paronychia where the matter unable to escape, burroughs beneath and destroys the soft parts, the periosteum suffers the same fate, and necrosis of the bone is the result; among the internal may be recognized "a scrofulous or venereal taint of constitution, the long continued use of mercury; and the effects of protracted and debilitating febrile diseases" but exposure to cold or cold and dampness is a much more fertile source of disease than any I have yet mentioned. these appear to act as predisposing causes; persons

who live in cold and damp districts are more frequently attacked than those living in warm; it has been observed that this disease is of more frequent occurence in the Northern and eastern states of our Union, than in the Southern states. F. Smith

Partial necrosis, is usually from external causes, bruises & contusions, & when the bone has been denuded of its periosteum: although it does not necessarily follow that because a bone is stripped of its periosteum it must perish, for if the bone be in other respects healthy, and enjoys a vigorous circulation, "granulations will gradually spring up and repair the breach". The bone, however, will be very apt to suffer exfoliation if the denudation be extensive owing to the degree of injury which has been inflicted on the capillary vessels of the part, although the bone might have been healthy at the time the injury was inflicted. The exposed part supposing that the disease has been occasioned by the removal of periosteum, remains white and dry, and after awhile exfoliates comes away in thin scales or lamina. The dead portion is separated accordng to Mayo, "partly by the absorption of the contiguous layer of living bone and partly by the absorption of the superficies of the dead bone," this is presumed to happen from the excavated and honey combed appearance which that surface of dead bone usually presents. Mr Wilson gives satisfactory proof of this that the

living tissue in contact with dead can effect its partial absorption. Adverting to the practice of transplanting teeth he says "the transplanted teeth used to adhere at first, but they seldom remain in their new sockets more than three or four years" several such teeth which Mr Hilton examined had lost their fangs by absorption. After the dead bone is separated the surface from which it has been removed is covered with florid granulations which by degrees assume the osseous character and thus finally replace either in part or entirely the lost substance.

When necrosis is general and pervades the whole thickness of the bone, that is, when it arises from internal causes by exposure to cold, for instance, and attacking a scrofulous constitution the process is a great deal more complicated. The inflammation seated in the bone, or periosteum, goes on to suppuration and matter forming between the bone and periosteum, separates the latter membrane from the bone, and if the soft parts do not yield or the surgeon does not interfere and give exit to the matter, it will continue to insinuate itself between the bone and investing membrane, until the whole shaft of the bone, being deprived of its proper nutrient vessels dies; but before the original bone is destroyed Nature ever on the alert, commences her operation of repair. The first step

in the operation, is the formation of a sort of osseous shell which seems to be designed to answer as a substitute for the dying bone, and serve at the same time to isolate it from the surrounding parts. – This new shell is formed by the effusion of coagulable lymph; the dead bone acting as a local irritant or extraneous body, excites inflammation in the ~~sur~~ circumjacent parts which become thickened and pour out lymph similar to that ~~thrown~~ around the extremities of fractured bones – After some time, varying according to the age and vigour of the patient, this substance acquires the properties of cartilage, and this, again in its turn is finally replaced by osseous matter arranged in the form of an irregular shell, from "one to three lines in thickness". This new cortical ~~formation~~ commenced by bone and maintained, "may chiefly affected by periosteum; having reached an aperture, caused by ulceration or by the knife (more frequently by the former) has its continuity interrupted, and an opening is left." – In cases of fracture without suppuration, ossification we shall find commenced by bone and continued by periosteum, and where this is deficient sustained by the surrounding parts which assume periostical character and function consequently the encasement of bone under such circumstances is continuous

But in this disease there is no substitute for deficient periosteum the surrounding soft parts have suppurated and are themselves reduced to the condition of an aperture or canal for the discharge of matter – This, however, is not a disadvantage, on the contrary were the deficiencies supplied by adventitious structure of similar capabilities the cortical portion would be also continuous and the matter would be denied an outlet and all the pains and dangers of acutely accumulating matter and deeply seated pus would inevitably ensue" –

As the deficiency of periosteum is not supplied a permanent aperture is left, termed "cloaca", results communicating with the cavity which contains the sequestrum, by means of sinuses with the surface of the limb, through which the sequestrum is to be expelled. The external orifice of this discharging canal is usually callous and of an elevated or pouting character called "papilla", and in every case where necrosis is at all extensive, there are generally several of these purulent canals, in connection with which, (through the cloaca) the probe may be passed into the sequestrum.

Through these apertures the sequestrum may be from time to time examined, to ascertain its condition, and as soon as it has become loose, it is through these openings enlarged if necessary, that

is to be removed — Whilst thus situated the "eschar is bathed in a thin fœtid sanious matter, or in thick white inodorous pus. "A part of it is absorbed by the vessels of the new formed bone;" in the same manner, it is supposed, as the fang of a transplanted tooth by the gum which surrounds it," Wilson.

The surface of the bone is usually rough, and its colour, either brownish, black or grayish: On the cylindrical bones it is usually ~~hard~~, and dry; whereas, in the short it is commonly porous remarkably brittle and moist, — When the dead bone has become sufficiently detached to be taken away, the assistance of the Surgeon is demanded and if it be slothful or negligent in abeyance Nature may accomplish the task; but with long continued pain, and great exhaustion of the patient; as soon as the sequestrum is removed whether by nature or by art the new-formed shell contracts, and by degrees assumes the shape and function of the bone it is destined to replace, —

While this contraction and adaptation is going on externally, a corresponding change is taking place within; osseous matter is deposited on the inner surface of the shell, and upon the extremities of the remaining bones and in this manner the cavity is filled; the time required always being in proportion to the extent of the cavity and the recuperative power of the in-

dividual. "If the necrosed bone previously contained a medullary canal - it is seldom or never reproduced, and the new bone, although in a high degree of vascularity is never able to withstand the effects of inflammation as well as the original bone." Suppuration having ceased, the cloacæ no longer useful, are slowly filled up, or greatly diminished by the formation from the osseous margins; the whole becomes firmly consolidated and the inflammatory process altogether subsides

This process certainly has its analogue in the reparation of the soft parts, the granulations which fill up the cavity of a soft part has certainly a close resemblance to the reproduction of osseous matter from the parent bone; the cuticular investment of the soft parts gradually extending from the circumference to effect cicatrization; bears a strict analogy to cortical formation beneath the periosteum which, covering in the deep substitute, may be said to effect it cicatrix

The bulky swelling of the limb owing to the infiltration of lymph in the superimposed soft parts; now sinks to its proper level; inflammation having now subsided the absorbents vessels commence their work with renewed vigor, taking away the soft parts from between the bony-

particles; which serves to condense and strengthen the new texture, and render it more efficient as a part of a column of support. and in consequence of which the enlargement of the limb gradually disappears and ultimately assumes the function of the parent bone; but the symetry of the limb is scarcely ever completely restored."

Concerning the complete regeneration of bone after loss of ~~said~~ its substance by disease; various opinions have ~~been~~, from time to time, been expressed by pathologists; some denying, other positively asserting its possibility. - There as in many other obscure points of pathology a candid appeal to facts as they have been recorded by physicians will do infinitely more than a thousand conjectures and the question is to be decided, only, by observation. - A number of cases have been related of complete reproduction of bone, Chuspert relates one of the scapula, Wiedmann of the lower jaw, other of the ulna &c. Carpenter speaking of the regeneration of bone says, "It is extremely complete, and in fact there is no structure of so complex a nature, which is capable of so thorough repair". "This power, he continues, is no where more than in the reformation of nearly a whole bone after destruction of the original one, by disease; all the attachments of muscles as well as external form and internal texture, being ultimate-

~~by which~~ is complete in the new bone, as they originally were in ~~that~~ which it has replaced.

The exact mode by which the new bone is constituted has also been a point of dispute among pathologists some attributing it to the periosteum; others to the remaining portions of bone, and it appears that the conclusions which most of them have come to is that the existance of the periosteum is essentially requisite to the complete reproduction. When the necrosis is internal the regeneration is performed by the parent bone, but in general and external necrosis the reparation is effected by conjoined agency both the bone and periosteum, the former appears to commence the operation while the latter is entrusted with its continuation and future nourishment. That the periosteum is essential to the complete reproduction is evident from the fact, that if the shaft of a long bone be destroyed and with it its periosteum, the formation of new bone will be confined to small additions of a conical form to the two extremities and a large intervening space left between them, whereas if the periosteum had remained entire the whole would have undoubtedly, been reproduced. Dr N. R. Smith

Nearly every bone in the body is liable to become affected with necrosis; those which enter into the formation ~~of the articulations~~ and are superficial, are more frequently attacked than those more deeply seat-

-ed: The spongy by having a higher degree of vitality and vascularity are very apt to terminate in suppuration: while on the contrary, the more compact bones in which the vital principle is less energetic and consequently more readily extinguished are apt to suffer necrosis: A very slight injury will frequently occasion an extensive exfoliation from the surface of a long bone; but a musket ball will pass through a spongy bone without giving rise to necrosis; suppurative inflammation occurring rather than the latter affection." Sir Chas Bell

The, tibia, femur, submaxillary, clavicle humerus, fibula, radius, and the ulna, are the bones most frequently affected but as we have said before no bone in the body is exempt; the scapula, ribs, metacarpal and phalanges as well as tarsal and metatarsal bones are often attacked,

The only disease with which this is liable to be confounded is caries and the primary symptoms of the two diseases do not differ materially from each other; and the diagnosis can seldom be determined with any degree of certainty until there is a discharge of some dark coloured splinters of bone, or until some of the fragments of dead bone can be felt with probe, or protrude through the opening in the soft parts, and are visible on separating its edges. - When these phenomena

are present, there can little or no doubt concerning the nature of the disease; but in cases of an opposite character the diagnosis is extremely difficult. In such cases a careful examination of the part should be made with the index finger; or where this is impracticable on account of the tortuous course of the canals or narrow condition of their orifices a probe should be employed, with which the condition of the bone could be accurately ascertained. —

The prognosis in this disease is in generally favorable; the disease is very submissive to proper treatment, and when this is practised at a proper period, the generality of cases does well: but nevertheleß, there are some cases more formidable in their progress, and may, even render amputation necessary; These are to be considered as exceptions to, rather, than the rule, Thus if the disease extend its ravages, to some important joint (the knee joint for instance) the leg would have to be amputated; or in chronic cases a similar procedure would be requisite, at a far more distant date; after many weeks and perhaps months have elapsed; when the separation has become far advanced but not yet completed; after the system has for a long time, borne up nobly under the exhausting burden of ~~the~~ irritation and discharge; but, now exhausted of its supply and no longer able to continue the contest, yield to the conflicting foe,

and all will be lost unless the cause of this disturbance be removed. In acute necrosis of young persons it sometime happens, that the violent inflammatory fever is followed by severe hectic; and these are soon followed by formidable hectic which must plainly be removed at all hazards by the removal of its cause, in such cases it may be our imperative duty to remove the limb; nevertheless if a free incision be made down to the bone and this trephined the limb in all probability might be saved; yet we are placed in a critical position; on the one hand we are in danger of sacrificing the life of our patient in our vain endeavour to save the limb, and on the other we are equally in danger of sacrificing the limb in our anxiety to succour life not yet brought in danger. subsequent to worst the operation. "We are then in a dilemma" says Dr. Miller, "from whose horns we can extricate ourselves only by a happy combination of knowledge, judgement, and experience.

In cases where the reproductive power has failed, or the periosteum has been destroyed; the limb would consequently shrink and contract, then the removal of the useless member will be a matter of expediency to both patient and surgeon.

The first symptoms of this disease are those of ostitis; after a patient has (for instance) been exposed to cold, he feels pain in the bone.

which is to be the seat of disease; this is preceded probably by a slight chill, the part becomes swollen, hard and tender; the tenderness increased on pressure; the pain increasing the constitution begins to sympathise, the temperature of the whole surface rises, the skin becomes hot and dry, the pulse more frequent, full and hard, lassitude and headache come on; the patient loses his appetite, is listless and confused, his tongue becomes white and his mouth parched, he is usually thirsty and the secretions of the body are deranged and diminished; in fact true inflammatory fever is set up. The pain in the part now is intense, perhaps of a throbbing character, the skin of the part is red, and a circumscribed tumour is formed in which may be felt distinct fluctuation; indicating the existence of matter, and ulceration; if not the lancet gives vent to the thin, sanious fluid, similar to that which attends caries. - All these phenomena indicate that there has been ostitis, and if the bone be now examined a considerable portion of it will be found to have perished. -

The disease sometimes assumes a more chronic form; the pain in the part is dull and deep seated, aggravated by motion and pressure, and usually worse at night; the part around the seat of inflammation becomes enlarged and hard, on account of the effu-

sion of coagulable lymph in the surrounding parts. This gradually extends along the bone until nearly its whole length becomes involved; this effusion which nature intends to form a substitute for the dying bone, begins now to enlarge, thicken and consolidate and presents the appearance, as if the bone were increased to twice or thrice its normal size, — The pain and inflammation continue to increase, the latter goes on to suppuration, no relief follows this result on account of the unyielding texture of the parts; the pain continues to increase; until ulceration give egress to the confined matter if this be not accomplished by art, — One or more of these openings make their appearance in proportion to the extent of the disease; These openings assume a pouting, callous character on the external soft parts, these are called "fistulæ", which communicate with the internal cavity by corresponding openings in the new shell, "cloacæ", — Through these openings the peculiarities which the dead bone present are to be ascertained and determined. — If the sequestrum be external it is felt smooth and solid, except at its circumference, where it feels rough and irregular by the sulcus of separation. When it is internal it feels rough and dense; and sounds resonant when struck by the probe. If it has continued for some time the pieces of bone becomes de

-tached and may be felt to move about in the cavity, —

During the stage of separation and concomitant one of reparation the discharge continues profuse and fetid; In consequence the con-
-stitutional symptoms of ostitis, both simple and suppurative which had shown all the symptoms of intense inflammatory fever now assume the hectic type -

But the local inflammatory process, yet continues, and will continue as long as the foreign body (which the sequestrum truly is) remains unextruded; it will be resented by the living parts; and a degree of inflammation will be kept up, sufficient to continue the ~~suppurative~~ suppuration. By continual irritation being kept up, in that immediate vicinity, the soft parts become highly vascular and somewhat indurated; so that when cut they feel as if the knife were passing through a piece of "gristle", rather than the ordinary soft parts; and the haemorrhage is invariably profuse

When the dead portion is detached it does not alway appear loose for it may be bound in tight embrace by the cortical formation. Generally, however, as soon as it is detached it is more or less moveable, which may be readily ascertained by a probe or the index finger and if it be not removed by art, it will be gradually pushed forward and protrude through

the opening, and the exposed part of dead bone will become blackened by atmospheric influences.

I design here to insert a few cases of necrosis, which have been treated in the Balt. Infy. by Dr. N.K. Smith; these cases noted under the observations of that Scientific, Skillful, and practical Surgeon, will speak as much for the treatment of this disease, as I could otherwise say in a volume

Case first; Saml. (col) aged 13 years, received a bruise on the anter-o-inferior part of the tibia in the autumn of 1844 - the part became swollen, hard and painful; the pain continued for some time; it was poulticed but this afforded no relief; it went on to suppuration and ulceration gave egress to the matter after this the pain was mitigated in some degree, but not entirely; the part continued hard and swollen, the swelling and hardness gradually ascending the leg until the whole length of the tibia (excepting its epiphises) was involved - by this time several orifices were formed through which escaped a considerable quantity of this foetid matter and occasionally small specula of bone At Christmas 1849 he was brought to the Infy. When he entered the house the part was swollen, hard and painful, with several pouting, fistulous orifices along the shaft of the tibia, each discharging matter; A new cortical shell had

been formed around the dead one; and through the openings, the cavity was examined and found to contain pieces of loose bone. These pieces were removed. A free incision was made over the "clo-acæ," down to the ~~bone~~ shell of bone, and a portion of this removed by a small mallet and chisel, sufficiently large to allow the extraction of the sequestra; one piece four inches in length and several smaller pieces were taken away with a pair of strong forceps. The patient suffered considerable pain, and lost large quantity of blood, but without any serious consequences to the constitution. The incision was filled with lint and the part poulticed; he was confined to the horizontal position and kept on moderate diet until the inflammatory symptoms disappeared; an anodyne was given at night when he suffered much pain; his bowels kept open by mild cathartics — At the expiration of a week the part was again examined with a probe and found to contain other portions of dead bone; these were removed as the other portions, and the same dressing and treatment ordered to be continued, until the local inflammatory symptoms abated; then dressed with simple cerate; all the dead fragments being now removed it was converted into a carious ulcer of the bone; it was syringed out daily, with warm water and castile soap; the discharge of matter favoured by dilating the orifices with a sponge

tent and the simple dressing continued. Under this treatment the local inflammatory symptoms disappeared, the discharge ceased in a great measure, the cavity began to fill up rapidly by granulations from beneath and around and in April 1848 she left the house, able to walk well, and the external orifice nearly cicatrized.

Case second. Susan (colr) aged 13 years received a bruise on the anterior part of the left tibia, just below the knee joint, in the winter 1848 by the kick of a horse. The bone was not broken. afterwards the part became swollen and painful; it was poulticed, matter formed and was let out by a physician, after the the pain was ameliorated for a time; but the surrounding part continued hard, and swollen. These gradually descended the bone to near the ankle joint; during the spring and summer following several openings were formed along the bone each discharging matter and occasionally small fragments of bone. These continued until Nov 1848 at which time she was brought to the Balt. Infr. She was then considerably emaciated and exhausted by the long continued irritation and discharge caused by the ulcerating bone. The part was sensitive and painful; and presented several pouting orifices. it was examined and found to contain dead bone. The soft parts were laid freely open over the "cloaca" and the new shell which was formed, was opened sufficiently large to allow the extraction of the sequestra, (this was done with a chisel and mallet)

several small sequestra were removed with the forceps, the patient suffered intense pain and lost a considerable quantity of blood during the operation; the incision was filled with lint and the part poulticed; she was confined to the horizontal position and an anodyne given to allay irritation; the bowels were kept free by mild cathartics; the limb was cleansed daily and poultices renewed. — A week after this operation the part was again examined with a probe and found to contain other portion of dead bone, another incision was made above the other, and the fragments of bone removed; it was filled with lint and dressed as before, but the constitution suffered more than after the first operation. This was attributed to the effects of sulphuric ether gas, which she inhaled for the purpose of rendering her insensible to the pain of the operation; for some time after the operation she was delirious and when rational complained of headache and weakness; her skin was hot and dry, pulse 120 — an anodyne was administered and these unpleasant symptoms were soon removed. poultices were continued to the part until the local inflamatory symptoms had disappeared. the openings were kept dilated by means of sponge tents to favour the discharge of matter, it was syringed out daily with warm water and castile soap and dressed with sim-

-ple cerate. the limb was ~~carefully~~ bandaged, under this treatment the pain was relieved ~~and~~ the discharge ceasing, and the limb presents a healthy appearance and when the notes were taken there was but one place in the bone diseased, and that was a small carious spot where a large sequestrum been removed; the other ~~parts~~ of the cavity were filled up; and this was nearly so; ~~and~~ presenting a healthy aspect, at the time the notes were finished. ——

Case third. Philip Meddes aged 18 years; of a scrofulous diathesis entered the Infy Dec 7th 1846. Three years previous to that time he was attacked by pain in the left fore arm; just above the wrist joint a circumscribed tumour was formed, this soon pointed, and ulceration soon gave egress to the matter, after this the pain ceased in some degree but the discharge of matter continued; the parts around became swollen and hard; these gradually ascended the arm to near the elbow; several other ripices were formed along the arm, in the same manner as the first and through these there was a continual discharge of matter, and occasionally small pieces of bone. These continued until he came to the Infy; when he entered the radius was found to be necrosed.

Through the openings the part was examined and a considerable portion of dead bone found in the cavity of new bone, which had already been formed. (it may be proper to state that the external

orifices were of the pouting, callous character usually termed "papillæ.")
The portions of dead bone were removed; a free incision was made down to the cortical portion, and a portion of this removed sufficiently large to allow the extraction of the sequestrum; this was done by a pair of strong forceps. But a part of the sequestrum was not sufficiently detached to permit its removal. The incision was filled with lint to stop the haemorrhage; the part was poulticed daily for a week; when it was again examined, and the remaining portion of dead bone was removed. this operation was attended with intense pain and considerable haemorrhage, the wound was again filled with lint and poulticed until the local inflammatory symptoms; this was soon accomplished; the pouting orifices which had existed, now assumed their proper level and in three week after the removal of the last portion of bone; was allowed to leave the house; without a trace of dead bone left. The discharge had nearly ceased, and the granulations on the soft parts presented a healthy appearance.—
Case 4 Chas Snow aged 35 years; was taken in april 1848 with pain and tenderness in the upper part of the right tibia; with these symptoms there was some fever, and the case was treated as one of rheumatism; the pain and swelling in the part increased; and a small tumour was formed containing matter; this was poulticed

but the matter bound down by integuments and fascia; insinuated itself beneath these and pointed some distance below the seat of disease it was opened and the matter evacuated; the discharge kept up and the pain continued during the summer and autumn and on the 3d of Dec. he entered the hosp; the diseased part was examined and a fistulous canal about four inches in length extended up the leg to the head of the tibia; this was then opened, but the seat of disease was not then detected; the next day it was examined again; and a cavity (as large as a hen's egg) was found in the head of tibia, containing a sequestrum of considerable size; the external orifice was enlarged and the sequestrum removed with a pair of forceps. The peculiarities in this case were; the limited extent of the disease, the manner in which it penetrated the bone; it was confined to the external portion of the head of the tibia, and no provisional calous had been formed around the dead portion

The removal of the sequestrum converted it into a carious ulcer and it was treated accordingly: the patient was confined to the horizontal position and the part poulticed, he was kept on the antiphlogistic regimen until the local inflammation concomitant upon the operation had subsided; the part was then syringed out with a solution of the sulphate of zinc

three grains to the ounce of water, and dressed with Turner's cerate. The orifices were kept open by sponge tents to favour the discharge of matter; under this treatment the ~~fis~~ discharge gradually ceased and granulations sprung up from the bottom and around the sides of the cavity, which gradually filled up; and in four weeks he left the house with the cavity nearly filled and the external granulations presenting a healthy appearance.

Case 4 Thos Spazier aged 23 years, was seized about the last of Sept 1848 with pain in the left thigh, accompanied with fever and loss of appetite; the pain was deep-seated, continued and increasing in intensity; the limb swelling and becoming tender; a physician was called in, and cups were applied along the thigh and some medicine given (but of what kind I know not) these were followed with but little benefit; When he entered the Hosp. (on the 14th of oct) he had slight inflammatory fever and the thigh swollen, hard and painful, the pain deep seated and intense, and the femur felt to be twice as large as usual.

This was considered to be the incipient stage of necrosis, and was treated accordingly. The patient was confined to bed and ~~treat~~ upon the antiphlogistic regimen. counterirritation was induced in the part by means of Granville's lotion, cloths saturated with this was applied to the part and prevented from evaporating by oil-

ed silk. this was kept to the part until it was blistered. and the application renewed as soon as the blistered surface healed; The hydriodate of potash was given in ℞ss dose, three times a day — his bowels kept open with some mild cathartic — equal parts of stramonium and belladonna ointment was made into an ointment, and the part anointed with it — and an anodyne given at night when the pain was considerable

At first the disease yielded with reluctance, but perseverence with the remedies proved successful; the pain and swelling were removed in a considerable degree, and the inflammatory fever had disappeared; she left the Inf on the 14th of Nov — But from improper exposure the disease was renewed with its pristine severity, and on the 23 of the same month, he returned to the Inf with the same symptoms presenting as when first he entered. The same plan of treatment was resorted to with the same happy results and on the 11th of Dec the disease was so far removed that he was permitted to return home.

Treatment — There are few diseases, in which Surgery has a more complete triumph, than, she has in Necrosis; and in this disease, it is; that Surgery is called upon to ~~interfere~~ and assist Nature in all its stages; In the first stage of the disease, when the inflammation is extensive; the patient must be confined to the

horizontal position, and kept on low diet, the part locally depleted by leeches or cupping glasses. If the patient be plethoric and otherwise able to bear it, blood should be taken from the arm, and his bowels cleared out by a brisk cathartic, Counter-irritation ought to be kept up on the surface: Granville's lotion answers this purpose very well this should be kept to the part until it is blistered this can be effected by preventing evaporation by covering the cloths with oiled silk, or, if the parts be swollen and hard an ointment composed of equal parts of Hydriodate & Mercurial ointments will keep up gentle irritation and cause the absorption of the infiltrated matter — The Hydriodate of potash has been highly recommended in this disease, coming on in a scrofulous diathesis, for its alterative and resolvent effects in doses from five to ten grains twice a day. If the patient be irritable an anodyne must be occasionally given, ten or fifteen grains of Dover's powder or from one to four drops of Hydrocyanic acid at night or as occasion may require. The local pain may be somewhat relieved by anointing the part with an ointment composed of equal parts of Stramonium and Bella donna ointments —

The continuation of this plan of treatment will be verified by the abatement of the local and general inflammatory symptoms. But should these remedies prove inefficient, to subdue the

inflammatory symptoms and these continue to increase in intensity, or, even be obstinate in yielding; more efficient measures must heat, once resorted to, - A free incision should be made down to the bone, and a button of this removed by the trephine, to relieve the tension of the parts and favour the discharge of matter; by this early operation much time, texture and pain, will be saved, to which the patient would otherwise be, eventually, doomed. The part should, now, be practiced to favour suppuration, and the exfoliation of the dead bone, if any be necessary must be left entirely to the work of Nature; we must content ourselves with overlooking her operations and taking care that they are not interrupted; with the later object in view the part should be kept at rest and if inflammatory reaction at any time threaten, leeches, fomentations, special rest, and the general antiphlogistic regimen rigidly enforced and maintained to procure its speedy arrest; If the discharge be great and hectic fever comes on we must endeavour to remove the cause, - support the system with tonics and stimulants; these must not be given in sufficient quantity to add to the excitement, nor increase the heat of skin, thirst and perspiration, When the exfoliation is complete it is, then, the duty of the Surgeon to interfere; Nature's power of separation is adequate and admirable, but her power of extrusion is

weak and imperfect, and the surgeon who imposes on her the latter is both negligent and unskilful."

The condition of the sequestrum may be ascertained by means of a probe, and when it is found to be detached; an incision should be made through the soft parts directly over the "cloaca", and a portion of the new formation cut away sufficiently large to allow the extraction of the sequestrum. For this purpose various instruments have been used and recommended Key's Saw Cutting forceps, &c.; but the ones, now, often used and considered by some, to be the best are the chisel and Mallet, with these the operation is performed with greater facility, and less pain to the patient, than with the others. After the opening is made the sequestrum is to be removed with a pair of strong forceps, When the sequestrum is long, and the opening near the middle of the cortical shell, the operation may be facilitated by cutting through the sequestrum with, cutting forceps, and removing each piece separately. After the sequestrum has been removed the wound should be filled with lint to prevent haemorhage, which might otherwise be profuse; a large poultice must be applied to the diseased part and a strict antiphlogistic regimen rigidly maintained, to keep down, the inflammatory symptoms which are apt to be the result of the interference, however,

An Inaugural Dissertation
On
Cephalalgia

Submitted to the Examination of the
Provost Regents & Faculty of Physic
of the
University of Maryland
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By
Thos. A. Lynch
of Maryland

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Cephalalgia.

The disease which I have selected as a subject for a brief dissertation, is one with which the whole human family is more or less afflicted - and perhaps there is no disease which entails more suffering on some of its victims than the one for consideration. Not but there are many diseases more dangerous to the vital economy than Cephalalgia, yet they are not so universally distributed among mankind, nor, are they so frequent in their attacks on the same person. We find headache occurring in every latitude. The inhabitants of the snow covered regions of the north, and those of the sunny south, are alike afflicted with Cephalalgia in some one of its various forms. The very frequency of this affection gives to it importance, and I think it should claim a full share of attention at the hands of every medical student. For there is no disease which it is more important

for him to possess a thorough knowledge of the pathology of, in reference to proper treatment - than this. And yet I much fear that as a general rule it receives as little or perhaps less attention than any other. Herein it is, that we find headache becoming worse under the treatment of many Medical men and it is very natural that it should be the case, when we consider the uniform treatment pursued in every case that may occur without any reference to the variety of the disease, or the cause upon which it depends, for we may have headache occuring in directly opposite states of the system, and of course demanding different modes of treatment, and yet we have men who call themselves physicians, treating every case that may arise, as dependant upon some derangement of the Prima via. To what are we to attribute

such unpardonable ignorance? To the little attention they have bestowed upon it they have considered it an unimportant affection; when indeed it is a very important one. First. I shall describe the characters and symptoms of headache which are very variable but are of great importance, In reference to its severity the pain may at first be so slight as hardly to attract the attention, and may vary until it becomes so severe as to be almost intolerable. In its situation it may be superficial or deep seated sometimes the pain is diffused so that it can be ascribed to no particular place or it may occupy only a part ~~under~~ more or less circumscribed; such as the forehead temples occiput or vertex; when one side of the head only is affected, it is called hemicrania, when the pain is confined to a small spot so that it can be covered with the finger

Clavus; when under the eyebrows, sub-orbital; when in the ear, otalgia &c. In character it is differently described by different individuals, as dull, heavy, numbing pricking, acute, tearing, splitting, lancinating boring, throbbing &c.
Some persons state that the head appears open, others that the pain resembles continued strokes on the cranium, made with a small hammer, or as if wedges or nails were driven into the brain, there are often heard various noises in the head, as whistling, humming, ringing buzzing, drumming and detonation; different affections of sight as ocular spectre, dimness, black spots, bright rings, sparks &c and more or less obtuseness of taste and odors General sensibility may be augmented, so that the slightest contact causes great agony; the scalp in particular is often excessively tender to the touch, Sometimes it is demenished or partially

destroyed. The memory is sometimes affected by frequent severe attacks. The collateral symptoms should also be attended to. The faces often hot, flushed and swelled, or pale, cold livid and sunk. The eyes may feel heavy or painful, and appear injected or suffused. Sometimes the circulation is increased the temporal and carotid arteries beating with violence; at others the pulse is small hard and weak, and the veins of the head and neck occasionally swollen. There may be thirst loss of appetite and disgust for food; acidity and flatulence of stomach, eructation, nausea and vomiting. The bowels are often costive and deficient in biliary secretion, the skin dry or unusually moist &c. Causes. "Women are more liable to headache than men, on account of their having a higher degree of irritability and delicacy of constitution. Their sedentary life also; and the great changes produced in the system by

the flow of the menses, particularly if it be retarded, increased or diminished render them peculiarly predisposed to this malady. Some physicians, suppose Cephalalgia to be hereditary and that it may be transmitted by the father or the mother for several generations. We know nothing however regarding this point Among other causes which predisposes to headache, are a too early or long continued use of the mental faculties; unrefrained indulgence in the passions, mental anxieties fulliving and consequent state of plethora; or, on the other hand insufficient diet, and anemia; indulgence in bed; neglect of exercise in the open air; Intestinal worms &c The exciting causes are numerous; such as are the abuse of vinous or spirituous liquors; errors in diet especially too great quanity or variety of food especially of indigestible rich or heavy articles; inspiration of deleterious gases, miasmata, impure air of crowded or insufficently ventilated rooms

suppression of accustomed discharges, as epistaxis, the menstrual secretion or hemorrhoidal flux, opontarious, or artificial leucorrhoea supine posture with the head low, a tight cravat, or straight corset, abrupt changes in the electrical changes of the air, low diet, and prolonged fasting; the various depressions, as alarm, fear, grief, anxiety of mind want of sleep, use of tobacco, digitalis, opium belladonna, aconitum, and other narcotics especially in certain idiosyncrasies, or in large or unaccustomed doses; costiveness or constipation exposure to the sun Finally Cephalalgia may be symptomatic of other diseases, as of fever, phrenitis congestion of the lungs, hypertrophy of the heart, the presence of worms, inflamation various diseases of the eye &c

Varieties— According to the best authority we have seven varieties of Cephalalgia. First— "The congestive form, congestion occasioned by increased or demunished—

vital action of the heart and bloodvessels — Second — The inflammatory, from inflammation of the membranes or substance of the Brain Third — The sympathetic, from disorder of the digestive, biliary, uterine, urinary and other ordans. Fourth — The organic form of the bones of the cranium, membranes, or substance of the brain — Fifth the neuralgic, from affection of the nerves distributed to the integuments. Sixth — The mistaslatic of disorders; and Seventh — The intermittent occuring at stated periods

Diagnosis — The congestive headache may be known by the occasional vertigo and a sense of fulness or weight in the head. The pain is acute, and not fixed to one spot or or long continued; It comes on gradually reaches its highest intensity and then slowly declines these changes are often very quick and are not observed. It is often produced by stooping, sleeping with the head

loss, wearing a tight cravat.
This variety may be devided in to two Kinds distinguished by the debilitated or pleth-
-oric state of the system The first is rec-
ognized by feblenes of pulse, palenes of countenance &c and the second variety the pulse is full, There are symptoms of plethora, and this form is generally met with in persons habituated to full living;
This variety of Cephalalgia is more severe either in the morning or in the evening.
The inflammatory headache is distin-
-guished by a strong pulse heat of surface and general fever, flushed countenance, suffusion of eyes and sometimes intolerance of light. The pain is very acute and throb bing accompanied with a pulsating noise in the ears or temples. The patient is excited restles, wakeful and irritable, in the more advanced stage, convulsions and delirium appear accompanied by sym toms which indicate inflamation of the

brain and its membranes – Sympathetic headache – When this form of headache is dependant upon any derangement of the stomach, liver, or alimentary canal it may be known by the foul state of the tongue, and improper performance of the digestive function, the pain is often diffused over the head, but is sometimes more circumscribed, usually affecting the forehead or one temple, particularly the left –
The headache is usually present in the morning when the person wakes; and in slight cases often disappears after breakfast or some time earlier – The organic headache in the earlier stage is with great difficulty distinguished from other varieties. A careful examination however into the previous history of the case will enable the observing physician to learn that the pain often occurs in paroxism without any apparent cause, and at irregular periods; that when present it is increased by con-

vesation and active occupations and relieved by solitude, tranquility and absolute repose. The character of the pain is lancinating, or darting apparently confined to one spot and if the bones are affected, increased by pressure. If there be vomiting it may be distinguished from that which accompanies dyspeptic headache by its being apparently independant of any error in diet or affection of the stomach, and by its occurring when the pain is most violent, and not producing any material relief. The neuralgic headache is readily known by the severity of the pain, and its shooting character following the course of the nerve, but sometimes confined to one spot. It is of short duration and comes on in violent paroxisms leaving intermissions which are some times considerable.

The metastatic headache includes two varieties. First Rheumatic headache may be known by the severe aching pain oc

cupying the scalp, increased on applying pressure or on the slightest movement of the muscles connected with it. It generally increases in the evening and is sometimes associated with inflammatory or congestive headache. The arthritic form is severe occurring in persons of a gouty diathesis The pain is attended with a sense of heat, or burning, a great tenderness and increased heat of scalp, flushed countenance confusion of thought, and loss of memory vertigo, dimness of vision, intolerance of noises and most of the cerebral symptoms which characterise the severe forms of the congestive and inflammatory varieties. The history of the case however and its connection with some of the forms of Gout will readily distinguish it.

The intermittent headache is analogous to the neuralgic and is distinguished by regularity of the paroxysms. The pain is often excruciating and is usually dependant

upon the same causes that produce inter-
-mittent fever.

Prognosis - The prognosis of headache en-
-tirely depends upon the accuracy of the
diagnosis - In all organic affections of the
brain the result is generally fatal although
if the symtoms are developed slowly this
may be deferred for several years especially
if judicious treatment be persued - In cases
of this variety therefore the prognosis
will always be unfavourable. Much caution
is also necessary in giving a prognosis in the inflammatory and metastatic
varieties. The arthritic in particular is
an affection demanding a very guarded
opinion. The prognosis in the sympathetic variety will depend upon the extent
to which disease affects those organs pri-
-marily disordered; but in this, and the re-
-maining varieties the prognosis is generally
favourable for the recovery of our patients
Treatment. It is a lamentable truth that

the treatment of Cephalgia generally speaking has been conducted on principles which partake too much of empericism and that purgatives and other remedies which act on the primæ viæ have been too indiscriminately employed. A study of the pathology of this affection however must convince the practitioner that headache may depend upon states of the system directly opposed to each other; That occasionally it is complicated with or seems to form a part of other maladies; and that consequently its treatment must be varied accordingly to the morbid conditions present, and the organs primarily affected: with this view a diagnosis of variety is absolutely essential. Congestive Headache. This variety will demand two opposite kinds of treatment according as it is dependant on increased or diminished action or in other words plethora or anæmia. If on the former general blood letting-

is indicated the extent of which is to be guided by the age and constitution of the patient. cold affusions to the head are also usefully combined with warm and stimulating applications to the feet. But should it be connected with or dependant upon an opposite state of the system, and symptoms of debility be present, then a stimulating and tonic plan of treatment is to be adopted which must be influenced by the state of exhaustion to which the patient is reduced. If this be extreme much caution is necessary as irritative fever is in such cases readily induced particularly in females. Small and repeated doses of Spts Ammoniae, or alkaline carbonates with some bitter infusion will improve the state of the system and increase the appetite. The diet should be now rich and at the same time light, and digestible, and a glass of good wine may be taken at dinner. Inflammatory Headache. This demands active bloodletting and antiphlogistic

treatment

Sympathetic Headache. The treatment of this variety of Cephalalgia must be directed to the cure or alleviation of those maladies on which it depends. The dyspeptic headache of authors is benefitted by all those means adopted to prevent indigestion and with this view a light diet, regular exercise in the open air, aperients combined with tonics, and such remedies as promote the regularity of the excretions and secretions, are indicated.

When Cephalalgia is connected with any derangement of the biliary functions (constituting the bilious headache) in addition to the general treatment above pointed out it is judicious to combine with the purgatives, such medicines as have a special action on the liver. For this purpose calomel or blue pill may be mixed with the purgative pill masses, and given in moderate doses according to the strength

of the patient. When headache follows the suppression of Cutaneous eruptions diaphoretics and the warm and vapor baths are to be employed. If it arise from disorders of the uterine functions removing the original affection is the only means of permanently remedying the Cephalgia The same may be said when it is connected with disorders of the Urinary or other organs. When the teeth are decayed extraction is necessary, or the application of remedies which alleviate the pain as opium, Creasote &c.

The Hysterical Headache is to be combated by the use of tonics, antispasmodics and purgatives in necessary doses according to the age and constitution of the patients.

"All the Therapeutic remedies useful for removing the general nervous derangement tend to relieve Cephalalgia"

Organic Headache. In this variety if there be reason to believe organic change-

exist in the substance of the brain, absolute tranquility and the horizontal position are necessary elements in the treatment.
With this should be combined; first general and local bloodletting, purgatives and antiphlogistic diet. This should be followed by blisters over the temples behind the ears, to the occiput, and nape of the neck frequently repeated and dressed by stimulating ointments in order to keep up discharge. If vomiting is a frequent symtom "This action to be relieved by some effervescing draught or hydro-cyanic acid, both of which have often been useful in temporarily alleviating the distress occasioned by it. In general however therapeutic remedies only alleviate the symptoms, and by no means prevent the progress of the disease"
When the bones are affected by a syphilitic taint in the system, remedies adapted to the cure of that malady are to be employed

If caries exist the usual surgical treatment is to be followed.

The metastatic headache including the rheumatic and arthritic, together with the neuralgic and intermittent v- -ies are to be treated in the same manner as the diseases of which they usually form a part.

An
Inaugural dissertation
on
Pneumonia
Submitted to the examination of the
Provost, Regents & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Wm. Hammond

Baltimore Infirmary
Feb. 1st. 1847.

To the attending Physicians & Surgeons of the Bath Infirmary; this essay is dedicated, as a trifling memento of their many marks of attention & kindness to the Resident Students of that institution, by

The Author.

I have chosen for the subject of my thesis, one which is well understood, & whose nature & phenomena are agreed upon by all authors of eminence. Acute idiopathic inflammation of the lungs occurring in a previously healthy adult, is what I propose to treat of. I make this distinction because there are many circumstances which modify materially the whole character of pneumonia, & the limits of my intended essay will not permit me to treat of the disease with all its complications.

Both for convenience & the sake of simplicity, before entering into a minute detail of its nature & peculiarities, a division into several

heads of its phenomena, will be advisable. For this purpose there is none or can there be any more simple & perfect than that followed by Dr. Watson, to whom I will be indebted not only for my heading, but for the general frame work of my production. The order which he proposes & which I intend to follow, is first, to state generally what pneumonia is, then its stages & the difference in the morbid anatomy attending each stage, the physical signs, the general symptoms, its course, prognosis & treatment. Pneumonia is an inflammation of all the tissues composing the lungs. Like inflammation in all other tissues & organs it presents different phenomena at different periods of its existence & tends to one or other of its usual terminations. During the course of a pneumonia the lungs present three

well marked & distinct stages.
The first is that of engorgement or congestion. The substance of the lung is gorged with bloody serum, which gives it a dark red appearance, renders it more dense, inelastic & less crepitous than healthy lung; it retains the impression of the finger & is, as it were œdematous. Its consistence is less firm, resembling in that respect the spleen, from which circumstance, the term splenization has been given to this stage. When it is cut, we find the internal surface presenting the same red appearance as externally & a large portion of the above mentioned bloody serum, rendered frothy by the admission of air, flows out from the cut surface. In this stage the mucous membrane of the bronchi is of a dark red colour.
The lung in this condition, is to all

appearances exactly similar to that state of engorgement, which is almost always found in that part of the lung which was the most dependant during the latter hours of life or after death, & is only to be distinguished from it, by observing the previous symptoms & by recollecting that the latter condition is never found any where but in the most dependant part; if therefore we find the congestion in other portions of the lung, it is certainly the effects of inflammation We come now to the second stage. We find the lung still red as before, but it no longer crepitates, it contains no air; its cut surface is either uniformly red, or is interspersed with black specks, occasioned by the black matter of the lung or the interlobular areolar tissue. There still flows out some red fluid, but it is much less

in quantity than before & is not pretty & if it be examined carefully, sometimes traces of commencing suppuration are to be found. The lung is more dense but also more friable, which latter circumstance is caused by the softening of the cellular tissue & it resembles in appearance the liver, hence it has recieved the title of hepatization, or as Andrall calls it red softening. If the whole lung be hepatized it will not collapse when the thorax is opened, it appears swelled & is marked by indentations from the ribs. In the third & last stage, we find the lung still impervious to air, heavy & solid as before, but its colour is now changed. It is of a grayish yellow cast, sometimes interspersed with the red & black pulmonary matter. It is still more friable than before & is in fact in a state of suppuration.

From the cut surface when gently pressed & sometimes even spontaneously, the pus is seen to ooze out, & the whole may be mashed up into a semifluid substance resembling, dirty pus. This state of things, Laennec calls gray hepatization, or purulent infiltration. Andral calls it, gray softening. It is a curious fact, that suppuration of the lungs, does not lead on to the formation of circumscribed abscess, but is diffused indiscriminately through all the diseased parts & is not separated by what might be called a line of demarcation from the healthy. This fact Dr. Watson accounts for, by referring to the effect which atmospheric air has upon an inflamed surface in determining suppuration. He says, that from its influence, the suppuration stage is induced before the adhesive effects

of inflammation will have had time to stop its diffusion, by the dense fibrinous coat which it forms around inflamed ~~parts~~ in other organs. This is undoubtedly one & a very powerful cause of the circumstance, but the general loose & sponge like structure of the lungs, contributes no little to the diffusion of the pus. Were the lungs equally excluded, with the liver from the atmosphere, we think, circumscribed abscess would much oftener be the result of inflammation in the ~~latter~~ latter than the ~~former~~ former organ, & then there would be nothing but the difference in their tissues to account for the different results.

Thus far I have spoken of pneumonia as attacking the whole or a greater part of the pulmonary tissue, of which there is a considerable map, but this disease appears to have a ~~seat~~ of

election, as it were; it does not attack all parts indiscriminately, although it does sometimes spread itself all over the lungs. It is more often seated in the right than the left lung. According to Andral in the proportion of two to one & it attacks both organs not quite so often as once in eight times.
It is also more often (found) in the lower than the upper lobes of the lungs, Andral says more than twice as often in the former than the latter.
We come now to the physical signs, Auscultation & percussion. By these we obtain as perfect knowledge of pneumonia as though we had the lungs in our hands. If the ear be applied to that part of the chest, under which the lung is in the first stage of inflammation, we hear a peculiar crackling sound, at the end of inspiration, which has been compared to many noises of

every day occurrance; such as the crackling produced when salt is thrown upon hot coals &c. " Dr. Watson calls this small crepitation; Laennec calls it crepitant rouchus " It is the dry crackling of pneumonia & perfectly pathognomonic of this disease " This sound is heard as soon as the inflammation is lighted up, at first blended with & rendered almost imperceptible by the respiratory murmur of health, now increasing as the inflammation advances in intensity & over space & in its turn drowning the vesicular murmur " This sound does not remain long in one place, it becomes less & less distinct as the disease advances & is followed by one of three different things " The inflammation may be resolved & then the normal vesicular breathing takes its place; or if the inflammation

progresses this small crepitation is either succeeded by no sound at all or by another abnormal sound which I shall presently describe under the name of bronchial breathing. Concerning the cause of this small crepitation, there has been some difference of opinion among writers. Dr. Williams has I believe given the best explanation of the phenomena. He says, that it is produced by the air being forced into the minute bronchial ramifications & air cells, whose sides are glued together by the adhesive mucous which is thrown out from their lining membrane during the inflammation. I have already said that this sound, if the inflammation advances is succeeded by another abnormal sound or none atall; much oftener however, by the former than the latter. When this change in sound is heard

the condition of the lung is also changed; it has passed from the first into the second stage, it is solid, hepatized & admits no air into its air cells or minute bronchial tubes & therefore no crepitation is heard; but the larger bronchi are still pervious & the air is heard rushing through them as if blown through so many quills & produces what I have before termed bronchial respiration. At this period of the disease, percussion over the affected part is dull & if whilst the ear is applied to the chest, the patient speak, his voice is heard to descend the bronchi & comes to the ear through the solid lung, which gives it a very different sound than when it is heard through the spongy texture of the healthy organ. It is much more perfect & distinct, although not sufficiently audible to be termed

pectoriloquy; it is called bronchophony. This increased resonance of the voice is owing to the solid lung, being a better conductor of sound than that organ in a healthy state. But if instead of the bronchial respiration, no sound is heard during respiration, what then is the condition of the diseased parts? Why then the hepatization is either so extensive that the thorax upon the affected side can neither dilate or contract, & although the larger bronchi are still pervious, the air is stagnant in them & of course produces no sound. Or the disease is situated in the very lowest part of the lower lobe, where there are no bronchial tubes large enough to give the sound, or the diseased part is superficial & of small extent & rendered impervious to the air. We have now traced pneumonia by the physical signs, through

two important stages of its existence & have arrived at what may be called the critical period of its course. We do not know whether the inflammation will go on to its third stage, or (whether the lung will) return step by step to its healthy state. Let us suppose the more favourable of the two results, by what physical signs will the retrocession of the inflammation be marked. Why, there where we have had nothing but bronchial respiration for some time, we will have at first a little crepitation mixed with it, then gradually the crepitation ~~the crepitation~~ will increase & the bronchial breathing & voice subside & the crepitation will be gradually intermingled with the respiratory murmur & will in its turn become less & less & at length be entirely succeeded by the smooth regular murmur of health. Thus we have the same signs in a reversed order that we have in the advancing

disease. But if instead of this favourable termination, the inflammation goes on to the stage of purulent infiltration, can we tell by the ear when this stage is about to supervene & trace it through its march. We can not; but of this we can judge from the general symptoms. Such now, is a superficial sketch of the physical signs of pneumonia. We come now to the general symptoms. Acute inflammation of the lungs, is generally ushered in with a chill, followed by heat & increased frequency & force of pulse; soon after these symptoms, we have a sharp cutting pain in the side with dyspnoea & cough & a peculiar kind of expectoration. The pain in pneumonia is dependant upon the accompanying inflammation of the pleura. It is more severe in the early stage of the disease & ceases before the pneumonia has subsided.

It is always aggravated by any motion that changes the relation of the costal & pulmonary pleuræ. After it has entirely ceased, if the patient attempts to make a full inspiration, there will be a sudden return of this acute pain, which is caused by the dragging & tearing asunder of the recent threads of false membrane, which have been thrown out by the inflammation. The dyspnœa is another symptom which claims attention. It is of course dependent upon the equilibrium between the quantity of blood entering the lungs to be oxidized & the air which is intended to oxidize it, being destroyed. In consequence of the diseased portion of the lung being unfit to perform its office, the whole duty of arterializing the blood devolves upon that which remains healthy, & as this portion will not contain a sufficient quantity of air with the ordinary number of inspirations to operate effectually upon

all the blood that is sent to the lungs, nature instinctively increases the number of respiratory movements & thus for a time a part of the lung is enabled to perform the duties of a whole one. But this state of things can not last long, sooner or later, imperfectly arterialized blood will be found circulating through the system, as evinced by the lividity & earthy appearance of the skin, especially of the face & lips & under the finger nails; delirium supervenes, denoting the circulation of venous blood through the brain & thus delirium becomes a symptom of pneumonia, & an important & unfavorable one too; for it denotes the pulmonary affection to be extensive. The natural number of respiratory movements, is about eighteen in a minute; in extreme cases of dyspnea they may increase to eighty or ninety, & this symptom may exist to

any degree between these two points. We may generally judge of the extent of the disease from the degree of the dyspnoea, but this is not an infallible test; for in some patients a slight inflammation will occasion great dyspnoea & vice versa. There is another peculiarity in the breathing when the disease is extensive & has reached the second stage. As the patient lies upon his back, (and by the way this is the attitude which he generally assumes.) his chest is seen to heave up as in full inspiration & instead of gradually subsiding as in health, it seems to be checked by something solid within the thorax, & this we know to be the hepatized lung. This peculiarity is called high breathing. We come now to consider the cough. This is not a very annoying symptom, but it is characteristic of the disease.

It is short & hacking & the patient involuntarily or rather unconsciously suppresses it, which seems to indicate that were it indulged in, it would give rise to pain. It is at first dry but soon is accompanied by a peculiar expectoration, which is pathognomonic of pneumonia & deserves to be described as a separate symptom. At the beginning of an attack of pneumonia, there is nothing characteristic of the disease in the sputa, if there happen to be any, which is not always the case. On the second or third day however, they become of a viscid tenacious character, & when collected in the bottom of a basin, the vessel may be inverted & so great is the tenacity of the mass that it can not be shaken from it. They are semitransparent & of a yellowish rust colour. The colour may vary in intensity, but it

is always dependent upon the same cause, namely the intermingling of blood & mucus, & the differences in their colour are solely dependent upon the different relative proportions in which these two ingredients exist. They are not streaked with blood as in bronchitis, but the blood & mucus are thoroughly amalgamated together. If there is but little blood, the sputa will be of a yellow colour, if the blood is greater in quantity, they will present the brownish yellow or rust colour & if the blood is still more increased they may be a decided red colour. Considering the sputa as a sign of pneumonia; we do sometimes have this disease without the characteristic sputa, but when the matters expectorated present the appearances which I have described, we certainly have a case of pneumonia, & the more intensely they

are marked, generally the more intense is the disease. If the inflammation recede, the sputa gradually lose their pathognomonic traits & assume the appearance of the expectoration of common Catarrh. But if the disease goes on to the third stage, the sputa may continue with little change to the end; they generally become less in quantity & frequently cease altogether; they do not cease, however, because the mucous is no longer secreted, but because they are either too tenacious or the patient has not strength enough to force them up, & then they accumulate in the air passages & the case ends by suffocation. Andral says, if they assume the appearance of liquorice water or prune juice, we may pronounce with certainty that the third stage has been reached

sometimes perfect pus, is secreted during this stage.
We have now considered cursorily all the signs & symptoms of pneumonia separately; they occur however together, & one set follow another with more or less regularity. The disease, is generally ushered in with a chill, or it may be only a slight feeling of coldness, which is followed by increased heat & acceleration of pulse; at this time a sharp stitching pain is felt in the side, which is increased by motion, consequently the breathing is constrained & performed solely by the abdominal muscles. If now the ear be applied to the chest over the affected part, there will be heard a little small crepitation mingled with the respiratory murmur. These are the initiatory symptoms of the first stage. About the

third day, we have in addition to these, which are all increased in intensity, except the pain, which becomes dull & is less complained of; the characteristic sputa, more or less marked, in proportion to the degree of the inflammation, the minute crepitation is now heard above the vesicular breathing & over a larger space than before & percussion, which was on the first day perfectly normal, is now slightly dull. The respiration is considerably interrupted & dyspnoea is becoming urgent. The lung now have one of three things taking place. The inflammation may be resolved & then the symptoms will occur in a reversed order, or it may spread itself suddenly over a whole lung & death may take place by asphyxia; this however, is a rare occurrence. If the disease does not get well by resolution, the general symptoms all

increase, & the ear applied to the chest will detect the commencing second stage, which circumstance will be confirmed by the percussion becoming dull. The lung may remain in this stage for days & sometimes two or three weeks without change, but usually in three or four days, a change takes place for better or worse. If the former, we have the same retrograde movement from the second to the first stage, that we had from the first to health; but if the latter, that is if the stage of purulent infiltration supervenes, we can not tell exactly when it commences, but can imagine its existence if the countenance becomes pale & ghastly & the sputa assume a purulent or liquorice water appearance. Of course it is not known whether recovery can take place from diffused suppuration of the lungs, as it

is not known exactly when that stage commences; but the presumption is, that it can not. Circumscribed abscess, is not, however necessarily fatal.

From statistical accounts, collected by Andral & others, the average duration of pneumonia, occurring as an idiopathic disease in a previously healthy adult, is ten days.

As to its causes, frequently none can be traced; but cold applied in some way or other to some part of the body, is undoubtedly the most frequent & I might almost say the only exciting cause.

The prognosis may be infered from what has already been said in speaking of its pathology. The greater the extent of the disease & the further it has progressed, of course the more unfavourable is the prognosis, & of these facts we will judge by the physical & general

signs. The prognosis is more unfavourable when the inflammation is seated in the upper than the lower lobes of the lungs.

What now are the indications for treatment in pneumonia? We have an acute inflammation of one of the three most important organs of which the human body is composed, will it be safe to stand by quietly & wait for resolution to take place?, most certainly not, the most intuper & that actively too. When the disease is caught in its first stage, Blood letting & antimony are our great agents. Blood letting has a twofold efficacy when practiced early in this disease. It not only subdues inflammation in the lungs as in other organs, but it directly lessens the amount of stimulus which these organs receive

from the blood, in performing their peculiar functions upon this fluid.

It is well known that rest is one of our most powerful adjuvants in the treatment of all inflamitory affections, & although the functions of the lungs can not entirely cease, yet they can fulfil their office in the economy at a comparatively low ebb, provided the system is brought into a corresponding low degree of vitality, & blood letting is the agent most capable of fulfiling both these indications. As to the amount of blood to be drawn & the frequency with which the practice is to be repeated, a great many regulations have been laid down by authors, but none of them are uniformly applicable. We may give as a general rule, that the patient is to be placed in a sitting posture & blood

is to be drawn from a large orifice until symptoms of syncope supervene, about which time the urgent symptoms of the disease will be found to have materially diminished or entirely subsided. When reaction comes on, if the pain & dyspnœa return & the pulse becomes again hard & frequent, the bleeding is to be repeated until it again effect the system & this process may be repeated again & again until the inflammation is subsided. We do not, however, often find it necessary to bleed oftener than the second or third time, particularly when we combine the administration ~~with~~ of Antimony with it. After the urgencies of the case have been subdued by a large bleeding, we keep them down by the administration of large doses of tartar emetic. In administering

this agent, it is not intended or desired, that it shall produce its ordinary emetic & cathartic effects, but we want to obtain its specific sedative effects upon the heart & arteries. It is remarkable how much of this agent the stomach will bear without its producing nausea & vomiting, when active inflammation is going on in the system, especially if seated in the lungs. The existence of such a condition seems to act as a preventative against these results. The first dose, however does generally produce nausea & vomiting, but after its effects have passed away, the medicine may usually be resumed & the dose increased without any unpleasant effects upon the stomach, but with a very marked & decided sedative operation upon the pulse. If purging come on, or the nausea obstinately

continue, each dose of the antimony should be guarded with a few drops of laudanum. Under this treatment, the disease will generally undergo a marked change for the better in the course of a few hours, sometimes however not for a day or two. After the inflammation has been checked & is being resolved, the medicine may be given less frequently, but aught not be entirely discontinued so long as any of the unpleasant symptoms of the disease remain. This is the treatment for the first stage. Suppose we find the lung hepatized, what change in our course of treatment will this change in the pathology of the disease make? In speaking of the pathology of the disease, I described the stage of hepatization under a single head, but in treating this

condition, it will facilitate description to consider it in two divisions.
We may have the inflammation existing in the second stage in a portion of the lung & the first stage rapidly progressing around it. The inflammation is radiating as it were, the center or nucleus from whence it started is in the second stage & the circumference in the first & as the disease progresses over space, from the circumference in the form of the first stage, so does it from the center in the form of the second. ~~Again~~
Again, we may have the second stage existing after the inflammation has ceased to extend itself & the diseased part is at a stand still, or after being hepatized for some time, is just about to enter into the state of purulent infiltration. Now with these two conditions very different symptoms & state of the general system, exist.

In the first we have all the active general symptoms of the first stage of the disease & a strict antiphlogistic course of treatment must be pursued. In the latter, the powers of life are at too low an ebb, for the system to bear the loss of blood & mercury must form the basis of our treatment. If we find the first of these conditions, the same treatment that I have pointed out for the first stage must be practised here until the inflammation is subdued & all febrile symptoms disappear, & then the absorption of the matter which have been effused into the substance of the lungs, may be promoted by slightly affecting the system with mercury & by the application of a blister or two to the chest. But if instead of this active set of symptoms, we find the pulse full, frequent & irregular, the countenance pale & the features sunken

& hastily & the extremities cold, indicating the approach of the complete dissolution of the lung, as well as of the body & soul, the lancet & tourniquet must be laid aside & the powers of life supported by diffusible stimuli, such as carbonate of ammonia, wine, snake root &c. & the patient well nourished, whilst the system is affected as fast as possible with Mercury.

When this last condition of things exists, Mercury is our only reliance for the cure of the disease & although the case is desperate, yet it has been recovered from, it has been cured, & what man has done, man can do.

Wm. Hammond

gd